

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 8-26-2012  
API #: 47-033-05562

Farm name: William Reel Operator Well No.: 13122

LOCATION: Elevation: 1257.77 Quadrange: West Milford

District: Grant County: Harrison  
Latitude: 12100 Feet South of 39 Deg. 10 Min. 00 Sec.  
Longitude 1575 Feet West of 80 Deg. 22 Min. 30 Sec.

Company: Dominion Transmission, Inc.

Address: 445 West Main St	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Clarksburg, WV 26301				
Agent: James D. Blasingame	16"	40	40	Sanded In
Inspector: Tristan Jenkins	10 3/4 "	815	815	CTS (600sks)
Date Permit Issued: 9-11-2011	7"	1986	1986	CTS (400sks)
Date Well Work Commenced: 2/29/2012	4 1/2"	4512	4512	Cement Top 800
Date Well Work Completed: 4/3/2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 4600				
Total Measured Depth (ft): 4600				
Fresh Water Depth (ft.): 48' : 424				
Salt Water Depth (ft.): None				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): None				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation 5th Sand - Bayard Pay zone depth (ft) 2360-2436

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow commingled MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

Second producing formation Balltown - Bradford - Benson Pay zone depth (ft) 3252-4370

Gas: Initial open flow 867 MCF/d Oil: Initial open flow Bbl/d

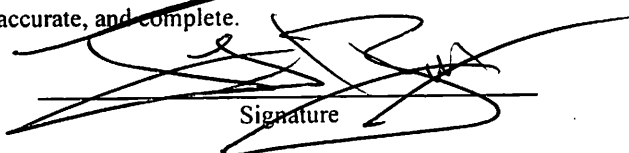
Final open flow 295 MCF/d Final open flow Show Bbl/d

Time of open flow between initial and final tests 11 Days Hours

Static rock Pressure 450 psig (surface pressure) after 24 Hours

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I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1-5-13  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Gamma Ray, Temp, Comp Density, Neutron, PE  
Induction \_\_\_\_\_

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

1st Stage : Benson 4360-4370 (20 shots) ; X-Link N2 Assist ; 406 sks 20/40 sand ; 500 gal acid

2nd Stage : Bradford 3672-3720 (32 shots) ; X-Link N2 Assist ; 255 sks 20/40 sand ; 500 gal acid

3rd Stage : Balltown 3252-3273 ( 24 shots) : X-Link N2 Assist : 248 sks 20/40 sand; 500 gal acid

4th Stage : Bayard 2427-2436 (18 shots) : X-Link N2 Assist : 255 sks 20/40 sand ; 500 gal acid

5th Stage : Fifth Sand 2360-2368 ( 16 shots) : X-Link N2 Assist : 186 sks 20/40 sand ; 500 gal acid

Plug Back Details Including Plug Type and Depth(s): None

Formations Encountered: \_\_\_\_\_ Top Depth \_\_\_\_\_ / \_\_\_\_\_ Bottom Depth  
Surface: \_\_\_\_\_

SEE ATTACHMENT

**Formation Description**  
**Dominion Transmission**  
**Well # 13122**

Formation	Top	Bottom	Show
Fill	0	20	
Sand & Shale	3	188	Damp @ 48'
Shale & Red Rock	188	330	
Sand & Shale	330	610	1/2" Stream @ 424
Sands	610	1100	
Shale	1100	1230	
Sand	1230	1260	
Shale	1260	1380	
Little Lime	1380	1393	
Shale	1393	1455	
Big Lime	1455	1570	
Big Injun	1570	1622	
Shale	1622	1830	
Gantz	1830	1850	
Shale	1850	2017	
Sand	2017	2032	
Shale	2032	2060	
Sand	2060	2230	
Fifty Foot	2230	2260	Gas @ 2232
Shale	2260	2355	
5th Sand	2355	2370	
Shale	2370	2425	
Bayard	2425	2435	
Shale & Siltstone	2435	2725	
Warren	2725	2840	
Shale	2840	2935	
Speechley	2935	3005	
Shale & Siltstone	3005	3200	
Balltowns	3200	3275	
Shale & Siltstone	3275	3672	
Bradford	3672	3720	
Shale	3720	4360	
Benson	4360	4395	
Shale	4395	TD	
TD	4747		

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 8-26-2012  
API #: 47-041-05655

Farm name: Helen Garrett Operator Well No.: 13127

LOCATION: Elevation: 1372.14 Quadrangle: Camden

District: Freemans Creek County: Lewis  
Latitude: 10925 Feet South of 39 Deg. 07 Min. 30 Sec.  
Longitude 2850 Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Dominion Transmission, Inc

Address: <u>445 West Main St</u>	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>Clarksburg, WV 26301</u>				
Agent: <u>James D. Blasingmae</u>	<u>13 3/8</u>	<u>34</u>	<u>34</u>	<u>Sanded In</u>
Inspector: <u>Bryan Harris</u>	<u>9 5/8</u>	<u>699</u>	<u>699</u>	<u>CTS (285 sks)</u>
Date Permit Issued: <u>10-18-2011</u>	<u>7</u>	<u>2267</u>	<u>2267</u>	<u>CTS (400 sks)</u>
Date Well Work Commenced: <u>12-19-2011</u>	<u>4 1/2</u>	<u>4650</u>	<u>4650</u>	<u>Cement Top 1320</u>
Date Well Work Completed: <u>1-19-2012</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>4747</u>				
Total Measured Depth (ft): <u>4747</u>				
Fresh Water Depth (ft.): <u>52</u>				
Salt Water Depth (ft.): <u>1311</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>183-186 : 617-622 : 1105-1110</u>				
Void(s) encountered (N/Y) <u>Depth(s) N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Balltowns - Benson Pay zone depth (ft) 3534-4530

Gas: Initial open flow 84 MCF/d Oil: Initial open flow Odor Bbl/d

Final open flow 949 MCF/d Final open flow Show Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure 920 psig (surface pressure) after 24 Hours

Second producing formation Barnard - Speechley Pay zone depth (ft) 2612-3269

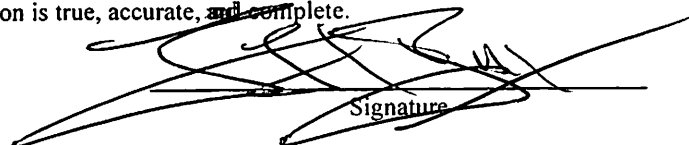
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow Commingled MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

  
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Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Photo Density, Compensated Neutron  
Gamma Ray, Temperature, Array Induction

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

1st Stage: Benson 4520-4530 ( 21 Shots) : X-Link N2 Assist ; 302 Sks 20/40 Sand ; 500 Gal Acid

2nd Stage : Balltowns 3390-3534 (49 Shots) : X-Link N2 Assist ; 300 Sks 20/40 Sand ; 500 Gal Acid

3rd Stage : Speechley 3246-3269 ( 24 Shots) : X-Link N2 Assist ; 200 Sks 20/40 Sand ; 500 Gal Acid

4th Stage : Bayard 2612-2622 (21 Shots) : X-Link N2 Assist ; 291 Sks 20/40 Sand ; 500 Gal Acid

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered: \_\_\_\_\_ Top Depth \_\_\_\_\_ / \_\_\_\_\_ Bottom Depth  
Surface: \_\_\_\_\_

SEE ATTACHMENT

## Formation Description

Formation	Top	Bottom	Show
Fill	0	3	
Sand & Shale	3	183	
Coal	183	186	Damp @ 52'
Sand & Shale	186	300	
Shales & Red Rock	300	516	
Sand & Shale	516	617	
Coal	617	622	
Sand & Shale	622	830	
Sand	830	855	
Shale	855	920	
Sand	920	1115	
Shale	1115	1403	
Salt Sands	1403	1535	Salt Water @ 1311
Shale	1535	1640	
Little Lime	1640	1662	
Shale	1662	1690	
Big Lime	1690	1760	
Big Injun	1760	1850	
Shale	1850	2040	
Gantz	2040	2060	
Shale	2060	2240	
Sand	2240	2260	
Shale	2260	2310	
Fifty Foot	2310	2390	
Shale	2390	2540	
5th Sand	2540	2560	
Shale	2560	2615	
Bayard	2615	2620	
Shale & Siltstone	2620	3112	
Speechley	3112	3153	
Shale & Siltstone	3153	3390	
Balltowns	3390	3535	
Shale & Siltstone	3535	4380	
Riley	4380	4410	
Shale	4410	4508	
Benson	4508	4530	Gas Check @ 4621
Shale	4530	TD	84 Mcf
TD	4747		

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 8-23-2012  
API #: 47-085-09948

Farm name: William Lamb Operator Well No.: 13130

LOCATION: Elevation: 1122.74 Quadrangle: Burnt House

District: Union County: Ritchie  
Latitude: 11900 Feet South of 39 Deg. 05 Min. 00 Sec.  
Longitude 5300 Feet West of 80 Deg. 55 Min. 00 Sec.

Company: Dominion Transmission, Inc.

Address: <u>45 West Main St.</u>	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>Clarksburg, WV 26301</u>				
Agent: <u>James D. Blasingame</u>	<u>16"</u>	<u>42</u>	<u>42</u>	<u>Sand In</u>
Inspector: <u>David Cowen</u>	<u>10 3/4"</u>	<u>803</u>	<u>803</u>	<u>CTS (600 sks)</u>
Date Permit Issued: <u>2/6/2012</u>	<u>7"</u>	<u>2523</u>	<u>2523</u>	<u>CTS(725sks)</u>
Date Well Work Commenced: <u>4/20/2012</u>	<u>4 1/2"</u>	<u>5196</u>	<u>5196</u>	<u>Top @ 2060</u>
Date Well Work Completed: <u>5/15/2012</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>5285</u>				
Total Measured Depth (ft): <u>5285</u>				
Fresh Water Depth (ft.): <u>53</u>				
Salt Water Depth (ft.): <u>1952</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>None</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Alexander ; Benson ; Riley Pay zone depth (ft) 4437-5062

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow Commingled MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation Balltown ; Speechley Pay zone depth (ft) 3330-4082

Gas: Initial open flow Show MCF/d Oil: Initial open flow Show Bbl/d

Final open flow 1210 MCF/d Final open flow Show Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure 675 psig (surface pressure) after 24 Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

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Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Gamma Ray, Temp, Comp Density, Neutron, PE Induction

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

5-14-12

**Halliburton Frac Job 5 stages 70% Quality Foam.**

1<sup>st</sup> Stage: Alexander 4930-5062 (25 Shots) : 142 Bbls Fluid, 25,000 Lbs Sand  
2<sup>nd</sup> Stage : Benson 4626-4798 (23 Shots) : 127 Bbls Fluid, 20,500 Lbs Sand  
3<sup>rd</sup> Stage: Riley 4437-4441 (20 Shots) : 155 Bbls Fluid, 20,000 Lbs Sand  
4<sup>th</sup> Stage: Balltown 3722-4082 (25 Shots) : 188 Bbls Fluid, 40,600 Lbs Sand  
5<sup>th</sup> Stage: Speechley 3330-3358 (20 Shots) : 160 Bbls Fluid, 34,100 Lbs Sand

Plug Back Details Including Plug Type and Depth(s): None

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

SEE ATTACHMENT

## Formation Description

Formation	Top	Bottom	Show
Fill	0	4	
Shales & Red Rock	4	800	Damp @ 53'
Sands & Shales	800	1390	
Salt Sands	1390	1680	Damp @1680
Shale	1680	1934	
Little Lime	1934	1953	Oil Show @ 1953
Shale	1680	1974	
Big Lime	1974	2020	
Big Injun	2020	2093	
Shales	2093	2277	
Weir	2277	2330	
Shale	2330	2410	
Berea	2410	2430	
Shale	2430	2600	
Thirty Foot	2600	2610	
Shale	2610	2630	
Gordons	2630	2755	
Shale	2755	2765	
Fourth Sand	2765	2792	
Shale	2792	2950	
Bayard	2950	2975	
Shale & Sand	2975	3310	
Warren	3310	3386	Oil Odor @ 3340
Shale	3386	3605	
Speechley	3605	3658	
Shales & Siltstones	3658	3885	
Balltown	3885	4082	
Shales	4082	4440	
Bradford	4440	4450	
Shale	4450	4590	
Riley	4590	4642	
Shales	4642	4716	
Benson	4716	4810	
Siltstones & Shales	4810	5000	
Alexander	5000	5060	
Shale	5060	TD	
TD	5285		

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 10/5/2012  
API #: 47-041-05657

Farm name: Allen & Diane Jerden Operator Well No.: 13128

LOCATION: Elevation: 1068 Quadrangle: Weston

District: Freemans Creek County: Lewis  
Latitude: 4000 Feet South of 39 Deg. 07 Min. 30 Sec.  
Longitude 9760 Feet West of 80 Deg. 25 Min. 00 Sec.

Company: Dominion Transmission

Address: <u>445 W. Main St</u>	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>Clarksburg, WV 26301</u>	<u>13-3/8</u>	<u>35</u>	<u>35</u>	<u>Sanded In</u>
Agent: <u>James Blasingame</u>				
Inspector: <u>Brian Harris</u>	<u>9-5/8</u>	<u>435</u>	<u>435</u>	<u>CTS (285 sks)</u>
Date Permit Issued: <u>11/21/2011</u>				
Date Well Work Commenced: <u>9/6/2012</u>	<u>7</u>	<u>1671</u>	<u>1671</u>	<u>CTS(330 sks)</u>
Date Well Work Completed: <u>9/27/2012</u>				
Verbal Plugging:	<u>4-1/2</u>		<u>4234</u>	<u>Cement Top 1370</u>
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>4301</u>				
Total Measured Depth (ft): <u>4301</u>				
Fresh Water Depth (ft.): <u>161,351</u>				
Salt Water Depth (ft.): <u>None</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>391</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Riley-Benson Pay zone depth (ft) 3760-4040

Gas: Initial open flow 84 MCF/d Oil: Initial open flow Show Bbl/d

Final open flow 474 MCF/d Final open flow Show Bbl/d

Time of open flow between initial and final tests 240 Hours

Static rock Pressure 730 psig (surface pressure) after 2 Hours

Second producing formation Warren, Speechely, Balltown Pay zone depth (ft) 2334-2972

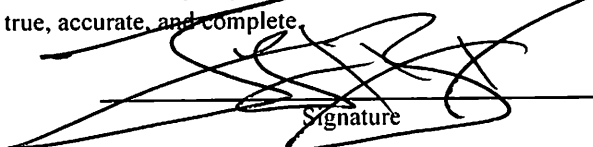
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow Commngled MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1-5-13  
Date

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Environmental Protection

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Gamma Ray, Density, Neutron, Temp  
PE, Induction \_\_\_\_\_

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

1st stage : Benson 4034-4040 ( 20 Shots) Foam Frac : 111 Bbls fluid, 307 sks sand,

2nd stage: Riley 3760-3856 ( 20 Shots) Foam Frac : 78 Bbls fluid , 105 sks sand

3rd stage: Balltown 2940-2972 ( 20 Shots) Foam Frac : 126 Bbls fluid, 304 sks sand

4th stage : Speechley 2718-2728 ( 20 Shots) Foam Frac : 129 Bbls fluid, 300 sks sand

5th stage : Warren 2334-2507 ( 23 Shots) Foam Frac : 106 Bbls Fluid, 204 sks sand

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
<u>Surface:</u>			

SEE ATTACHED SHEET

**Formation Description**  
**Dominion Transmission**  
**Well # 13128**

Formation	Top	Bottom	Show
Sand	0	200	7" Stream Water @ 161
Shale	200	320	
Sand	320	391	6" Stream Water @ 351
Coal	391	401	Coal
RR & Shale	401	792	
Salt Sands	792	900	
Shales	900	1102	
Little Lime	1106	1137	
Shale	1137	1157	
Big Lime	1157	1232	
Big Injun	1232	1331	Gas Odor @ 1282
Shale	1331	1519	Gas Check @ 1376 (84 mcf)
Gantz	1519	1539	
Shale	1539	1624	
Fifty Foot	1624	1643	
Sand & Shale	1643	1960	
Fourth Sand	1960	1965	
Shale	1965	2016	
Fifth Sand	2016	2040	
Shales	2040	2334	
Warren	2334	2509	
Shale	2509	2609	
Speechley	2609	2730	
Shales	2730	2940	
Balltowns	2940	2972	
Shales & Siltstones	2972	3810	Gas Check @ 3103(odor)
Rileys	3810	3860	
Shale	3860	4032	
Benson	4032	4040	
Shales	4040	TD	
Drillers TD	4301		Gas Check @ Collars (Odor)



WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 9-15-2012  
API #: 47-041-05661

Farm name: Marshall Green Operator Well No.: 13141

LOCATION: Elevation: 1435 Quadrangle: Camden

District: Freemans Creek County: Lewis  
Latitude: 6810 Feet South of 39 Deg. 07 Min. 30 Sec.  
Longitude 9130 Feet West of 80 Deg. 35 Min. 00 Sec.

Company: Dominion Transmission, Inc.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>445 West Main St</u>				
<u>Clarksburg, WV 26301</u>	<u>16</u>	<u>33</u>	<u>33</u>	<u>Sanded In</u>
Agent: <u>Mr. James D. Blasingame</u>				
Inspector: <u>Bryan Harris</u>	<u>10-3/4</u>	<u>809</u>	<u>809</u>	<u>CTS (535sks)</u>
Date Permit Issued: <u>5-23-2012</u>				
Date Well Work Commenced: <u>8-15-2012</u>	<u>7</u>	<u>2709</u>	<u>2709</u>	<u>CTS (820 sks)</u>
Date Well Work Completed: <u>9-10-2012</u>				
Verbal Plugging:	<u>4-1/2</u>	<u>5246</u>	<u>5246</u>	<u>Cement Top 2100</u>
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>5282</u>				
Total Measured Depth (ft): <u>5282</u>				
Fresh Water Depth (ft.): <u>48</u>				
Salt Water Depth (ft.): <u>None</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>None</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Balltown-Benson Pay zone depth (ft) 3918-5040

Gas: Initial open flow ODOR MCF/d Oil: Initial open flow SHOW Bbl/d

Final open flow 822 MCF/d Final open flow Show Bbl/d

Time of open flow between initial and final tests 120 Hours

Static rock Pressure 975 psig (surface pressure) after 24 Hours

Second producing formation WARREN-SPEECHLEY Pay zone depth (ft) 3463-3650

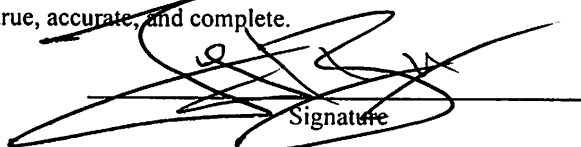
Gas: Initial open flow COMMINGLED MCF/d Oil: Initial open flow COMMINGLED Bbl/d

Final open flow COMMINGLED MCF/d Final open flow COMMINGLED Bbl/d

Time of open flow between initial and final tests COMMINGLED Hours

Static rock Pressure COMMINGLED psig (surface pressure) after COMMINGLED Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1-5-13  
Date

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Office of Oil & Gas  
JUL 16 2013  
WV Department of  
Environmental Protection

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Gamma Ray, Density, Neutron, Temp PE.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

1st Stage: Benson 5024-5040 (25 Shots) : 152 Bbls Fluid, 399 sks Sand.

2nd Stage : Balltown 3918-3924 (20 Shots) : 130 Bbls Fluid, 300 sks Sand. 3

3rd Stage: Speechley 2650-3774 (24 Shots) : 119 Bbls Fluid, 298 sks Sand.

4th Stage: Warren 3480-3500 (20 Shots) : 122 Bbls Fluid, 192 sks Sand

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

SEE ATTACHED SHEET

## Formation Description

WELL # 13141

Formation	Top	Bottom	Show
Soil	0	10	
Shales & Sand	10	49	Damp @ 48'
Shales & Red Rock	51	350	
Sands	350	390	
Sands & Shales	390	1180	
Sands	1180	1312	
Sand & Shale	1312	1580	
Salt Sands	1580	1970	
Shale	1970	2160	
Little Lime	2160	2180	
Shale	2180	2210	
Big Lime	2210	2260	
Big Injun	2260	2372	
Shales	2372	2560	
Gantz	2560	2575	
Sand & Shale	2575	2755	
Gordons	2755	2882	
Shale	2882	2970	
4th Sand	2970	3010	
Shale	3010	3076	
5th Sand	3076	3078	
Shale	3078	3410	
Warren	3410	3512	
Shale & Sand	3512	3606	
Speechley	3606	3760	
Shales & Siltstones	3760	3918	
Balltown	3918	4160	
Shales & Siltstones	4160	4810	
Riley	4810	4820	
Shales	4820	5020	
Benson	5020	5046	
Shales	5046	TD	
TD	5282		

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 10-29-2012  
API #: 47-041-05663

Farm name: M.B. Riley Heirs Operator Well No.: 13139

LOCATION: Elevation: 1370 Quadrangle: Vadis

District: Freemans Creek County: Lewis  
Latitude: 7820 Feet South of 39 Deg. 07 Min. 30 Sec.  
Longitude 1530 Feet West of 80 Deg. 37 Min. 30 Sec.

Company: Dominion Transmission, Inc.

Address: 445 West Main St	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Clarksburg, WV 26301	16"	35'	35'	Sanded In
Agent: James Blasingame				
Inspector: Brian Harris	10 3/4"	761'	761'	CTS(570 Sks)
Date Permit Issued: 5/23/2012				
Date Well Work Commenced: 9/21/2012	7"	2757'	2757'	CTS (700Sks)
Date Well Work Completed: 10/15/2012				
Verbal Plugging:	4 1/2"		5204'	Cement Top @ 2124'
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 5260				
Total Measured Depth (ft): 5260				
Fresh Water Depth (ft.): 76'				
Salt Water Depth (ft.): None				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): None				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation See Frac Report Pay zone depth (ft)

Gas: Initial open flow Show MCF/d Oil: Initial open flow Show Bbl/d

Final open flow 741 MCF/d Final open flow 2 Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure 1170 psig (surface pressure) after 12 Hours

Second producing formation See Frac Report Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

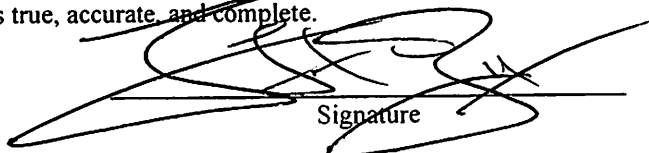
Final open flow Commingled MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

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Office of Oil & Gas  
10-30-2012  
West Virginia Department of  
Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1-5-13  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list GR,Temp,Density,PE,Ind.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

1st Stage: Benson 5028-5036 (20 Shots) : Foam Frac with 203 Bbls & 306 Sks Sand & 500 Gal Acid

2nd Stage : Riley 4796-4912 ( 20 Shots) : Foam Frac with 159 Bbls & 200 Sks Sand & 500 Gal Acid

3rd Stage : Bradford 4550-4570 ( 20 Shots) : Foam Frac with 165 Bbls & 201 Sks Sand & 500 Gal Acid

4th Stage : Balltown 3656-3940 ( 20 Shots) : Foam Frac with 190 Bbls & 302 Sks Sand & 500 Gal Acid

5th Stage : Speechley 3406-3520 ( 20 Shots) : Foam Frac with 163 Bbls & 201 Sks Sand & 500 Gal Acid

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

SEE ATTACHED SHEET

## Formation Description

Dominion Transmission

Well # 13139

Formation	Top	Bottom	Show
Fill	0	9	
Sand	9	15	
Sand & Shale	15	30	
Shale & Red Rock	30	187	Damp @ 76'
Sand & Shale	187	417	
Shale & Red Rock	417	476	
Sand & Shale	476	550	
Sand	550	725	
Sand & Shale	725	840	
Shales	840	1180	
Sand	1180	1370	
Sand & Shale	1370	1560	
Sand	1560	1685	
Sand & Shale	1685	1870	
Sand	1870	1995	
Shale	1995	2140	
Little Lime	2140	2180	
Shale	2180	2206	
Big Lime	2206	2268	
Big Injun	2268	2348	
Shale	2348	2568	
Gantz	2568	2590	
Shale	2590	2770	
Sand	2770	2782	
Shale	2782	2850	
Sand	2850	2854	
Gordon	2854	2880	
Shale	2880	3418	
Speechley	3418	3520	
Shale & Siltstone	3520	3655	
Balltowns	3655	3942	Gas Check @ 4245 : Ordor
Shale & Siltstone	3942	4550	
Bradford	4550	4572	
Shale	4572	4796	
Rileys	4796	4890	
Shale & Siltstone	4890	5028	
Benson	5028	5066	Gas Check @ 5165 : Ordor
Shale	5066	TD	
TD	5260		Gas Check @ TD : Ordor

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1-7-2013  
API #: 47-103265

Farm name: Mackey-Wolfe 201 Operator Well No.: 494501227

LOCATION: Elevation: 1626 Quadrangle: Thornton 7.5'

District: Cove County: Barbour  
Latitude: 39.255415 Feet South of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.  
Longitude: -79.886676 Feet West of \_\_\_\_\_ Deg. \_\_\_\_\_ Min. \_\_\_\_\_ Sec.

Company: Mountaineer Keystone, LLC

Address: 6031 Wallace Road Ext. Suite 300	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Wexford, PA 15090	20"	42'	42'	3.7 cu. yards
Agent:	13 - 3/8"	921'	906'	861
Inspector: Joe McCourt	9 - 5/8"	1,947'	1,932'	806
Date Permit Issued: 08/01/2012	5.5"	12,608'	12,593'	2,114
Date Well Work Commenced: 8/10/2012	7 - 7/8" Pilot Hole	None	None	541
Date Well Work Completed: 12/24/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 7,889' H, 7,989' Pilot				
Total Measured Depth (ft): 12,639 H, 7,989' Pilot				
Fresh Water Depth (ft.): 100'-750'				
Salt Water Depth (ft.): 1,350'-1,700'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 155', 275', 335', 375', 440', 530', 535'				
Void(s) encountered (N/Y) Depth(s) No				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1-7-2013  
Date

Were cuttings caught during drilling? Yes<sup>x</sup> No

**Pilot hole - PLEX, ECS, Sonic Scanner and FMI. CBL on Surface & Intermediate.**

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

### Perforated Intervals, Fracturing, or Stimulating:

**Plug Back Details Including Plug Type and Depth(s):**

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

**See Attached Sheet**



# **Mackey Wolfe 201 As Drilled Formation Tops**

	<b>MD</b>	<b>TVD</b>
<b>Big Lime</b>	<b>1405</b>	<b>1405</b>
<b>1st Elk</b>	<b>4604</b>	<b>4604</b>
<b>Burkett Shale</b>	<b>7597</b>	<b>7519</b>
<b>Tully Limestone</b>	<b>7629</b>	<b>7536</b>
<b>Mahantango Shale</b>	<b>7742</b>	<b>7584</b>
<b>Marcellus Shale</b>	<b>8510</b>	<b>7776</b>
<b>Purcell Limestone</b>	<b>8726</b>	<b>7827</b>
<b>Lower Marcellus</b>	<b>8762</b>	<b>7833</b>

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: January 2, 2013

API #: 47-1304741

Farm name: Taylor, Douglas & Shirley Operator Well No.: J.M. Bennett #26

LOCATION: Elevation: 905' Quadrangle: Grantsville

District: Sheridan County: Calhoun  
Latitude: Feet South of Deg. Min. Sec.  
Longitude Feet West of Deg. Min. Sec.

Company: Buckeye Oil Producing Co.

Address: PO Box 129, Wooster, OH 44691	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Agent: Henry W. Sinnett	7"	235	235	Cmt to surface
Inspector: Ed Gainer	4-1/2"	2765	2765	90 sks. 174.6 cu/ft.
Date Permit Issued: 8/2/12				
Date Well Work Commenced: 8/4/12				
Date Well Work Completed: 12/21/12				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 2765				
Total Measured Depth (ft): 2765				
Fresh Water Depth (ft.): 60				
Salt Water Depth (ft.): 906				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Gordon-Gantz Pay zone depth (ft) 2447-2740  
Gas: Initial open flow 10 MCF/d Oil: Initial open flow 1 Bbl/d  
Final open flow 20 MCF/d Final open flow 5 Bbl/d  
Time of open flow between initial and final tests 72 Hours  
Static rock Pressure 900 psig (surface pressure) after 72 Hours

Second producing formation Berea Pay zone depth (ft) 2363-2384  
Gas: Initial open flow 5 MCF/d Oil: Initial open flow 10 Bbl/d  
Final open flow 10 MCF/d Final open flow 20 Bbl/d  
Time of open flow between initial and final tests 72 Hours  
Static rock Pressure 390 psig (surface pressure) after 72 Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Mark J. Little  
Signature

1/2/2013

Date

Were core samples taken? Yes \_\_\_\_\_ No ☒

Were cuttings caught during drilling? Yes \_\_\_\_\_ No ☒

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Density, Neutron-Induction

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perf from: 2447-2740, 33 shots. Fracked w/ 72,683 gal. water 30,000 lbs. 20/40 sand

32 BPM @ 1176 psi ISZP 680

2363-2384, 17 shots. Fracked w 30,430 gal. water 23,000 lbs. 20/40 sand

20 BPM @ 1148 psi ISPI 752

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
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Surface:

Big Injun	1942		1994
Berea	2351		2386
Gantz	2440		2472
30'	2588		2634
Gordon	2711		2742



WR-35  
Rev (9-11)State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well WorkDATE: 11-28-2012  
API #: 47-029-00141

REVISED

Farm name: Allison HNK 3H M Operator Well No.: 834412

LOCATION: Elevation: 1275' Quadrangle: East Liverpool South

District: Clay County: Hancock  
Latitude: 1520' Feet South of 40 Deg. 32 Min. 30 Sec.  
Longitude 14600' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496				
Oklahoma City, OK 73154-0496	13 3/8"	662'	662'	735 Cu. Ft.
Agent: Eric Gillespie	9 5/8"	1525'	1525'	696 Cu. Ft.
Inspector: Bill Hendershot	5 1/2"	8309'	8309'	2122 Cu. Ft.
Date Permit Issued: 1-18-2012				
Date Well Work Commenced: 4-29-2012				
Date Well Work Completed: 7-30-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 5175' (cement plug @ 3720'-5175')				
Total Measured Depth (ft): 8309'				
Fresh Water Depth (ft.): 500'				
Salt Water Depth (ft.): 795'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 585'				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation West Falls Pay zone depth (ft) 4,550'-5096'

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow 1,161\* MCF/d Final open flow 5 Bbl/d \*Calculated

Time of open flow between initial and final tests 239 Hours

Static rock Pressure 3,001\* psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

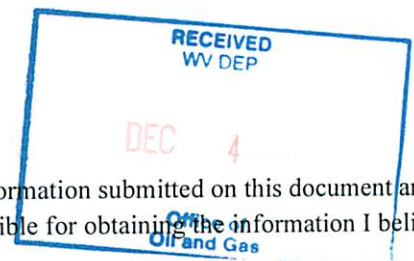
Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams  
Signature

12-3-2012  
Date



Were core samples taken? Yes<sup>X</sup> No                      Were cuttings caught during drilling? Yes<sup>X</sup> No

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See attached)

Plug Back Details Including Plug Type and Depth(s): (cement plug @ 3720'-5175')

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

(See attached)



**Vertical**

Formation/Lithology	TVD Top	MD Top	TVD Bottom	MD Bottom
Pennsylvanian Unconsolidated	0'	0'	615'	615'
Big Injun SS	615'	615'	690'	690'
Shale	690'	690'	1300'	1300'
Berea SS	1300'	1300'	1375'	1375'
Shale	1375'	1375'	3800'	3800'
Java Shale	3800'	3800'	4200'	4200'
West Falls Fm.	4200'	4200'	4950'	4950'
Tully Limestone	4950'	4950'	4988'	4988'
Hamilton Shale	4988'	4988'	5070'	5070'
Marcellus Shale	5070'	5070'	5100'	5100'
Onondaga Limestone	5100'	5100'		
<b>Pilot TD</b>			<b>5175'</b>	<b>5175'</b>

**Horizontal (from  
Mudlogs)**

Pennsylvanian Unconsolidated	0'	0'	615'	615'
Big Injun SS	615'	615'	690'	690'
Shale	690'	690'	1300'	1300'
Berea SS	1300'	1300'	1375'	1375'
Shale	1375'	1375'	3800'	3800'
Java Shale	3800'	3800'	4200'	4200'
West Falls Fm.	4550'	5096'		
<b>Well TD</b>			<b>4618'</b>	<b>8254'</b>
Tully Limestone	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated
Hamilton Shale	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated
Marcellus Shale	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated
Onondaga Limestone	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 6/22/11  
API #: 4705101384

Farm name: Zien Operator Well No.: 1H

LOCATION: Elevation: 1300' KB Quadrangle: Majorsville

District: Webster County: Marshall  
Latitude: 7323 Feet South of 39 Deg. 55 Min. 00 Sec.  
Longitude 11304 Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chief Oil & Gas

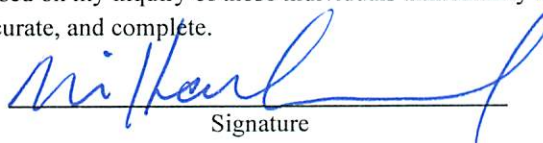
Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
5960 Sherry Ln - Suite 1500				
Dallas, TX 75225	24"	80'	80'	Sanded in
Agent: Chad S. Lovejoy	20"	397'	397'	
Inspector: Bill Hendershot	13 3/8"	1159'	1159'	1192 circ
Date Permit Issued: 10/7/10	9 5/8"	2379'	2379'	906 circ
Date Well Work Commenced: 11/22/10	5 1/2"	10997'	10997'	2523'
Date Well Work Completed: 12/21/10				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6776'				
Total Measured Depth (ft): 11301'				
Fresh Water Depth (ft.): 98'				
Salt Water Depth (ft.): NA				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 825'				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation MRCL Pay zone depth (ft) 7049'  
Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 1573 MCF/d Final open flow NA Bbl/d  
Time of open flow between initial and final tests 24 Hours  
Static rock Pressure NA psig (surface pressure) after NA Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

6-7-12  
Date

RECEIVED  
JUL 18 2012  
OFFICE OF OIL AND GAS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STATE OF WEST VIRGINIA



Were core samples taken? Yes \_\_\_\_\_ No ☒

Were cuttings caught during drilling? Yes ☒ No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MWD

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

500 shots

Sand 1,856,205 # 100 mesh

Sand 2,823,750 # 40/70 mesh

107,306 Bbl treated FW

Plug Back Details Including Plug Type and Depth(s): NA

<u>Formations Encountered:</u> <u>Surface:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
Shale	0	/	145
Sandstone & Shale - 1" Water 98'	225	/	547
Coal	547	/	550
Sandstone & Shale	550	/	739
Coal	739	/	746
Sandstone & Shale	746	/	828
Coal	828	/	835
Sandstone & Shale	835	/	935
Shale/Red Rock	935	/	1220
Sandstone & Shale - Gas Show 2029'	1220	/	4416
Shale - KOP 6340'	4416	/	6621
Burkett	6621	/	6713
Tully	6713	/	6780
Hamilton	6780	/	7049
Marcellus	7049	/	11301

JUL 18

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: JUN 26 2012  
API No: 47-097-03791H  
Lease No: 63848, 210294, 210295, 210296

Farm Name: WOODY, D.J., ET AL Operator Well No. ALT8BHS (406837)

LOCATION: Elevation: 2460.74' Quadrangle: Alton 7.5'

District: Washington County: Upshur

Latitude: 1,564 Feet South of: 38 Deg. 47 Min. 30 Sec.  
Longitude: 1,604 Feet West of: 80 Deg. 10 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: <u>P.O. Box 1248</u>				
<u>Jane Lew, WV 26378</u>				
Agent: <u>Kent Wright</u>				
Inspector: <u>Bill Hatfield</u>				
Date Permit Issued: <u>05/20/2011</u>				
Date Well Work Commenced: <u>10/06/2011</u>	<u>20"</u>	<u>40'</u>	<u>40'</u>	<u>68 sks</u>
Date Well Work Completed: <u>01/28/2012</u>				
Verbal Plugging:	<u>13 3/8"</u>	<u>660'</u>	<u>660'</u>	<u>435 sks</u>
Date Permission granted on:				
Rotary Cable Rig <u>X</u>	<u>9 5/8"</u>	<u>2001'</u>	<u>2001'</u>	<u>640 sks</u>
Total Vertical Depth (feet): <u>5570'</u>				
Total Measured Depth (feet):	<u>7"</u>	<u>5533'</u>	<u>5533'</u>	<u>750 sks</u>
Fresh Water Depth (ft.): <u>N/A</u>				
Salt Water Depth (ft.): <u>N/A</u>				
Is coal being mined in area (N/Y)?: <u>No</u>				
Coal Depths (ft.): <u>N/A</u>				
Void(s) encountered (N/Y) Depth(s)				

**OPEN FLOW DATA** 01/28/2012 - VERTICAL AND HORIZONTAL DRILLING INCOMPLETE. PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ 12 Hours  
Static Rock Pressure \_\_\_\_\_ psig (surface pressure) after 12 Hours

Second Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \* \_\_\_\_\_ MCF/d Oil: Initial open flow \* \_\_\_\_\_ Bbl/d  
Final open flow \* \_\_\_\_\_ MCF/d Final open flow \* \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ \* Hours  
Static rock Pressure \* \_\_\_\_\_ psig (surface pressure) after \* Hours

**\* COMMINGLED WITH PREVIOUS FORMATIONS**

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Kent Wright  
Signature

6-25-12  
Date



State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: JUN 26 2012  
API No: 47-097-03790H  
Lease No: 63848, 210294, 210295, 210296

Farm Name: WOODY, D.J., ET AL Operator Well No. ALT8AHS (406835)

LOCATION: Elevation: 2460.74'

Quadrangle: Alton 7.5'

District: Washington

County: Upshur

Latitude: 1,578 Feet South of: 38 Deg. 47 Min. 30 Sec.  
Longitude: 1,616 Feet West of: 80 Deg. 10 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 1248				
Jane Lew, WV 26378				
Agent: Kent Wright				
Inspector: Bill Hatfield				
Date Permit Issued: 05/20/2011				
Date Well Work Commenced: 09/13/2011	20"	40'	40'	130 sks
Date Well Work Completed: 01/20/2012				
Verbal Plugging:	13 3/8"	657'	657'	430 sks
Date Permission granted on:				
Rotary Cable Rig X	9 5/8"	2044'	2044'	640 sks
Total Vertical Depth (feet): 7405'				
Total Measured Depth (feet):	7"	5528'	5528'	700 sks
Fresh Water Depth (ft.): N/A				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): N/A				
Void(s) encountered (N/Y) Depth(s)				

**OPEN FLOW DATA** 01/20/2012 - SET CEMENT PLUG WITH 435 SKS @ 5000'. VERTICAL AND HORIZONTAL DRILLING INCOMPLETE. PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 12 Hours  
Static Rock Pressure \_\_\_\_\_ psig (surface pressure) after 12 Hours

Second Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \* MCF/d Oil: Initial open flow \* Bbl/d  
Final open flow \* MCF/d Final open flow \* Bbl/d  
Time of open flow between initial and final tests \* Hours  
Static rock Pressure \* psig (surface pressure) after \* Hours

**\* COMMINGLED WITH PREVIOUS FORMATIONS**

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

Date



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Page 2 of 2

WELL: ALT8AHS (406835)

Were core samples taken? Yes ☐ No ☒ Were cuttings caught during drilling? Yes ☒ No ☐

Were ☐ Electrical, ☐ Mechanical, ☒ or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**PERFORATED INTERVALS, FRACTURING, OR STIMULATING:**

1/20/2012 SET CEMENT PLUG WITH 435 SKS @ 5000'.

NO FRACTURE.

VERTICAL AND HORIZONTAL DRILLING INCOMPLETE.

PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

**FORMATIONS ENCOUNTERED:**

Fill	0	40	Surface Rock	40	110	Sand&Shale	110	155	Sand	155	368
Shale	368	405	Sand/Shale	405	521	Sand/Shale	521	546	Sand/Shale	546	740
Shale	740	810	Sand&Shale	810	1000	RedRock Shale	1000	1055	Sand/Shale	1055	1160
RedRock/Shale	1160	1180	RedRock/Shale/Sand	1180	1350	Sand	1350	1500	RedRock	1500	1570
Sand&Shale	1570	1680	Sand	1680	1810	Sand&Shale	1810	2055	Cement	2055	2085
Sand&Shale	2085	2100	Shale	2100	2235	Sand&Shale	2235	2505	Shale	2505	2530
Shale&RedRock	2530	2595	Shale	2595	2956	Sand&Shale	2956	3236	Shale	3236	3570
Sand&Shale	3570	3620	Shale	3620	4355	Sand&Shale	4355	4470	Shale	4470	4630
Sand&Shale	4630	4850	Shale	4850	4910	Sand Shale	4910				

GAMMA			
RAY /			
FORMATION			
#ALT8AHS (406835)	TOPS		47-097-03790H
	TOP	BASE	
FORMATIONS MEASURED IN TVD			
HOLE NOT LOGGED UNTIL KICKOFF POINT			
BURKETT	7120	7180	
TULLY	7180	7215	
HAMILTON	7215	7300	
MARCELLUS	7300	7387	
TVD TD	7413		

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm Name: Randy and Lisa McDowell B 6HOperator Well No.: 627052LOCATION Elevation: 1356'District: MeadeLatitude: 1250 ft South of 39° 45' 00"Longitude: 4600ft West of 80° 40' 00"Quadrangle: WileyvilleCounty: Marshall

Company: Chesapeake Appalachia, L.L.C.  
P.O. Box 18496  
OKC, OK 73154-0496

Agent: James E. Grey

Inspector: Bill Hendershot

Date Permit Issued: 06/15/2009

Date Well work commenced: 08/20/2009

Date Well Work completed: 09/19/2009

Verbal Plugging Permission

Granted on / /

Rotary ☒ Cable ☐ Rig

Total Depth (ft): 12,027 TVD (ft): 7,127

Fresh Water Depth (ft): NA

Salt Water Depth (ft.): NA

Is coal being mined in area (Yes ☐ No ☒)

Coal Depths (ft):

Was this well logged and plugged back?

Yes ☐ No ☒ if yes -

depth cement plug set \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
13 3/8	1,205'	1,205'	CTS
9 5/8	2,706'	2,706'	CTS
5 1/2	12,027'	12,027'	2,315 sks

**RECEIVED**  
Office of Oil & Gas

JAN 17 2013

WV Department of  
Environmental Protection

## Open Flow Data

1<sup>st</sup> Producing Formation

Pay Zone Depth 7,734 ft to 11,786 ft

Gas: Initial Open Flow 2692 Mcf/day

Oil: Initial Open Flow N/A bbl/day

Final Open Flow N/A Mcf/day

Final Open Flow N/A bbl/day

Time of Open Flow between Initial and Final Tests

N/A hours

Static Rock Pressure 3,920 psig after

hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Chesapeake Energy

Well No.: 627052

## Perforated Intervals

1 <sup>st</sup> Stage	Marcellus	10	holes from	11,484 ft to 11,786 ft
2 <sup>nd</sup> Stage	Marcellus	10	holes from	11,109 ft to 11,411 ft
3 <sup>rd</sup> Stage	Marcellus	10	holes from	10,734 ft to 11,036 ft
4 <sup>th</sup> Stage	Marcellus	10	holes from	10,359 ft to 10,661 ft
5 <sup>th</sup> Stage	Marcellus	10	holes from	9,984 ft to 10,286 ft
6 <sup>th</sup> Stage	Marcellus	10	holes from	9,609 ft to 9,911 ft
7 <sup>th</sup> Stage	Marcellus	10	holes from	9,234 ft to 9,536 ft
8 <sup>th</sup> Stage	Marcellus	10	holes from	8,859 ft to 9,161 ft
9 <sup>th</sup> Stage	Marcellus	10	holes from	8,484 ft to 8,786 ft
10 <sup>th</sup> Stage	Marcellus	10	holes from	8,109 ft to 8,411 ft
11 <sup>th</sup> Stage	Marcellus	10	holes from	7,734 ft to 8,036 ft

## Fracturing / Stimulation

1 <sup>st</sup> Stage	Type of Treatment Slickwater	
	Total Acid 5,000 Gal of 15 % HCl	Breakdown Pressure 6,030 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,418psi   MTP 9,431 psi
	Total Fluid 16,994 bbl	Total Nitrogen 0 scf
		Total Sand 303,142 lb 100 mesh
		Total Sand 310,425 lb of 40/70
	ISIP 4,875 psi	5 min 4,045 psi
2nd Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,888 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,775 psi   MTP 9,263 psi
	Total Fluid 11,858 bbl	Total Nitrogen 0 scf
		Total Sand 292,157 lb 100 mesh
		Total Sand 303,786 lb of 40/70
	ISIP 4,548 psi	5 min 3,849 psi
3rd Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,056 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,097 psi   MTP 9,467 psi
	Total Fluid 14,378 bbl	Total Nitrogen 0 scf
		Total Sand 292,157 lb 100 mesh
		Total Sand 303,300 lb of 40/70
	ISIP 5,119 psi	5 min 3,875 psi
4th Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,670 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,575 psi   MTP 9,437 psi
	Total Fluid 13,419 bbl	Total Nitrogen 0 scf
		Total Sand 299,932 lb 100 mesh
		Total Sand 302,960 lb of 40/70
	ISIP 4,318 psi	5 min 3,530 psi
5th Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15 % HCl	Breakdown Pressure 5,815 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,350 psi   MTP 9,123 psi
	Total Fluid 11,998 bbl	Total Nitrogen 0 scf
		Total Sand 298,735 lb 100 mesh
		Total Sand 306,768 lb of 40/70
	ISIP 4,987 psi	5 min 3,765 psi
6th Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,483 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,625 psi   MTP 9,512 psi
	Total Fluid 11,886 bbl	Total Nitrogen 0 scf
		Total Sand 301,548 lb 100 mesh
		Total Sand 300,563 lb of 40/70
	ISIP 4,543 psi	5 min 3,558 psi
7th Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,499 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,192 psi   MTP 9,107 psi
	Total Fluid 11,887 bbl	Total Nitrogen 0 scf
		Total Sand 301,140 lb 100 mesh
		Total Sand 301,980 lb of 40/70
	ISIP 4,882 psi	5 min 3,831 psi
8th Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,884 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,119 psi   MTP 8,897 psi
	Total Fluid 11,938 bbl	Total Nitrogen 0 scf
		Total Sand 301,140 lb 100 mesh
		Total Sand 316,470 lb of 40/70
	ISIP 4,783 psi	5 min 3,965 psi
9th Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,466 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,344 psi   MTP 9,505 psi
	Total Fluid 11,977 bbl	Total Nitrogen 0 scf
		Total Sand 299,534 lb 100 mesh
		Total Sand 318,360 lb of 40/70
	ISIP 4,780 psi	5 min 3,812 psi
10th Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,179 psi
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,344 psi   MTP 9,361 psi
	Total Fluid 11,977 bbl	Total Nitrogen 0 scf
		Total Sand 300,048 lb 100 mesh
		Total Sand 302,400 lb of 40/70
	ISIP 4,780 psi	5 min 3,812 psi
11th Stage	Type of Treatment Slickwater	





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Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 12-17-12  
API #: 47-103266

Farm name: Mackey-Wolfe 202 Operator Well No.: 494501227

LOCATION: Elevation: 1626 Quadrangle: Thornton 7.5'

District: Cove County: Barbour  
Latitude: 39.255434 Feet South of Deg. Min. Sec.  
Longitude: -79.88663 Feet West of Deg. Min. Sec.

Company: Mountaineer Keystone, LLC

Address: 6031 Wallace Road Ext. Suite 300 Wexford, PA 15090	Casing & Tubing 20"	Used in drilling 41'	Left in well 41'	Cement fill up Cu. Ft. 3.5 cu. yards
Agent:	13 - 3/8"	923'	919'	844
Inspector: Joe McCourt	9 - 5/8"	1,968'	1,964'	812
Date Permit Issued: 07/03/2012	5.5"	12,006	11,990'	2,917
Date Well Work Commenced: 8/10/2012				
Date Well Work Completed: 12/7/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 7,929'				
Total Measured Depth (ft): 12,292'				
Fresh Water Depth (ft.): 100' - 750'				
Salt Water Depth (ft.): 1350 - 1700'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): 155', 275', 335', 375', 440', 530', 535'				
Void(s) encountered (N/Y) Depth(s) No				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Waiting on Completion Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation Waiting on Completion Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

Date

RECEIVED  
Office of Oil & Gas  
DEC 27 2012  
WV Department of Environmental Protection

12-18-12

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11-12-2012  
API #: 47-1502878

Farm name: King, Marjorie A. Operator Well No.: 27

LOCATION: Elevation: 998' Quadrangle: Elkhurst

District: Union County: Clay  
Latitude: 0 Feet South of 38 Deg. 26 Min. 44.7 Sec.  
Longitude 0 Feet West of 81 Deg. 12 Min. 25.1 Sec.

Company: Rouzer Oil Company

Address: <u>P.O. Box 987 Spencer, WV 25276</u>	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	<u>9 5/8"</u>	<u>351'</u>	<u>351'</u>	<u>110</u>
Agent: <u>J. B. Hildreth</u>	<u>7"</u>	<u>1529'</u>	<u>1529'</u>	<u>248</u>
Inspector: <u>Ed Gainer</u>	<u>4 1/2"</u>	<u>1951'</u>	<u>1951'</u>	<u>87</u>
Date Permit Issued: <u>12-05-2011</u>				
Date Well Work Commenced: <u>6-25-12</u>				
Date Well Work Completed: <u>10-3-12</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>1980'</u>				
Total Measured Depth (ft): <u>1980'</u>				
Fresh Water Depth (ft.): <u>350'</u>				
Salt Water Depth (ft.): <u>1100'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Big Injun Sand Pay zone depth (ft) 1884'

Gas: Initial open flow 100 MCF/d Oil: Initial open flow 0 Bbl/d

Final open flow 25 MCF/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 48 Hours

Static rock Pressure 80 psig (surface pressure) after 48 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

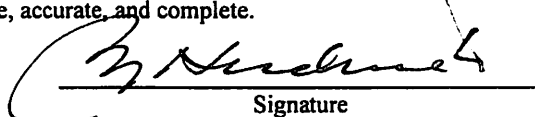
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

12-18-12  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 42 holes between 1884' to 1898'

Stimulation: Sand fracture consisting of 679 bbl. of water and 49,300 lbs. of sand with a breakdown pressure of 1,810 psi and maximum treating pressure of 1,930 psi

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

See attached.

# LOGICAL RECORD OF KING NO. 27

<u>Formation</u>	<u>Depth</u>
Soil	0 - 6
Sand	6 - 85
Slate	85 - 120
Shale	120 - 130
Sand	130 - 300
Slate	300 - 420
Sand	420 - 480
Slate	480 - 570
Sand	570 - 610
Slate	610 - 640
Sand	640 - 700
Slate	700 - 730
Shell/Slate	730 - 760
Sand/Slate	760 - 820
Slate	820 - 880
Sand	880 - 1050
Sand/Shale	1050 - 1140
Sand	1140 - 1330
Sand/Shale	1330 - 1370
Sand	1370 - 1410
Sand/Shale	1410 - 1460
Sand	1460 - 1495
Shale/Red Rock	1495 - 1595
Maxon Sand	1595 - 1645
Little Lime	1645 - 1700
Pencil Cave	1700 - 1710
Big Lime	1710 - 1820
Keener Sand	1820 - 1850
Big Injun	1850 - 1900
Red Rock	1900 - 1980

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11-12-2012  
API #: 47-1502879

Farm name: King, Marjorie A. Operator Well No.: 28

LOCATION: Elevation: 1022 Quadrangle: Elkhurst

District: Union County: Clay  
Latitude: 0 Feet South of 38 Deg. 26 Min. 47.7 Sec.  
Longitude 0 Feet West of 81 Deg. 12 Min. 29.0 Sec.

Company: Rouzer Oil Company

Address: <u>P.O. Box 987 Spencer, WV 25276</u>	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	<u>9 5/8"</u>	<u>352'</u>	<u>352'</u>	<u>110</u>
Agent: <u>J. B. Hildreth</u>	<u>7"</u>	<u>1,568'</u>	<u>1,568'</u>	<u>254</u>
Inspector: <u>Ed Gainer</u>	<u>4 1/2"</u>	<u>2,003'</u>	<u>2,003'</u>	<u>77</u>
Date Permit Issued: <u>12-05-2011</u>				
Date Well Work Commenced: <u>7-5-12</u>				
Date Well Work Completed: <u>9-6-12</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>2,054</u>				
Total Measured Depth (ft): <u>2,054</u>				
Fresh Water Depth (ft.): <u>N</u>				
Salt Water Depth (ft.): <u>1,120</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Big Injun Sand Pay zone depth (ft) 1907

Gas: Initial open flow 75 MCF/d Oil: Initial open flow 0 Bbl/d

Final open flow 25 MCF/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 48 Hours

Static rock Pressure 75 psig (surface pressure) after 48 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

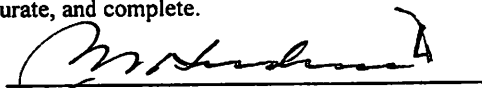
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

12-18-12  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 40 holes between 1,907' to 1,927'.

Stimulation: Sand fracture consisting of 728 bbl. of water and 44,500 lbs. of sand with breakdown pressure of 1,551 psi and maximum treating pressure of 2,142 psi.

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

See attached.

# GEOLOGICAL RECORD OF KING NO. 28

<u>Formation</u>	<u>Depth</u>
Soil	0 – 10
Sand	10 – 50
Slate	50 – 90
Shale	90 – 100
Sand	100 – 300
Slate	300 – 420
Sand	420 – 490
Slate	490 – 550
Sand	550 – 570
Slate	570 – 590
Sand	590 – 650
Slate	650 – 680
Shell/Slate	680 – 710
Sand/Slate	710 – 790
Slate	790 – 820
Sand	820 – 1110
Sand/Shale	1110 – 1140
Sand	1140 – 1360
Sand/Shale	1360 – 1400
Sand	1400 – 1440
Sand/Shale	1440 – 1470
Sand	1470 – 1500
Shale/Red Rock	1500 – 1520
Sand/Shale	1520 – 1525
Shale	1525 – 1545
Maxon Sand	1545 - 1595
Little Lime	1595 – 1650
Pencil Cave	1650 – 1660
Big Lime	1660 – 1770
Keener Sand	1770 – 1800
Big Injun	1880 – 1934
Red Rock	1934 – 2054

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11-12-2012  
API #: 47-1502880

Farm name: King, Marjorie A. Operator Well No.: 29

LOCATION: Elevation: 1092' Quadrangle: Elkhurst

District: Union County: Clay  
Latitude: 0 Feet South of 38 Deg. 26 Min. 51.4 Sec.  
Longitude 0 Feet West of 81 Deg. 12 Min. 34.2 Sec.

Company: Rouzer Oil Company

Address: <u>P.O. Box 987, Spencer, WV 25276</u>	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	<u>9-5/8"</u>	<u>352'</u>	<u>352'</u>	<u>110</u>
Agent: <u>J. B. Hildreth</u>	<u>7"</u>	<u>1,606'</u>	<u>1,606'</u>	<u>260</u>
Inspector: <u>Ed Gainer</u>	<u>4-1/2"</u>	<u>2,079</u>	<u>2,079</u>	<u>57</u>
Date Permit Issued: <u>12-05-11</u>				
Date Well Work Commenced: <u>7-17-12</u>				
Date Well Work Completed: <u>8-16-12</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>2,108</u>				
Total Measured Depth (ft): <u>2,108</u>				
Fresh Water Depth (ft.): <u>100</u>				
Salt Water Depth (ft.): <u>1,200</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>450 to 453</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Big Injun Sand Pay zone depth (ft) 1,954

Gas: Initial open flow 75 MCF/d Oil: Initial open flow 0 Bbl/d

Final open flow 20 MCF/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 48 Hours

Static rock Pressure 60 psig (surface pressure) after 48 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

12-18-12  
Date



Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes Y No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_  
\_\_\_\_\_

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 44 holes between 1,954' to 1,976'

Stimulation: Sand fracture consisting of 628 bb. of water and 41,800 lbs. of sand with breakdown pressure of 1,456 psi and maximum treating pressure of 2,110

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

See attached.

# GEOLOGICAL RECORD OF KING NO. 29

<u>Formation</u>	<u>Depth</u>
Soil	0 – 8
Sand	8 – 82
Slate	82 – 120
Shale	120 – 150
Sand	150 – 300
Slate	300 – 420
Sand	420 – 450
Coal	450 – 453
Slate	453 – 580
Sand	580 – 650
Slate	650 – 680
Sand	680 – 700
Sand	700 – 740
Slate	740 – 770
Shell/Slate	770 – 800
Sand/Slate	800 – 830
Sand/Slate	830 – 860
Slate	860 – 890
Slate	890 – 930
Sand	930 – 960
Sand	960 – 990
Sand	990 – 1020
Sand	1020 – 1050
Sand	1050 – 1090
Sand	1090 – 1110
Sand/Shale	1110 – 1180
Sand/Shale	1180 – 1312
Sand	1312 – 1370
Sand	1370 – 1410
Sand/Shale	1410 – 1450
Sand	1450 – 1500
Sand/Shale	1500 – 1570
Sand	1570 – 1600
Shale/Red Rock	1600 – 1665
Sand/Shale	1665 – 1684
Shale	1684 - 1738
Maxon Sand	1738 – 1790
Little Lime	1790 – 1800
Pencil Cave	1800 – 1910
Big Lime	1910 – 1940
Keener Sand	1940 – 1988
Big Injun	1988 – 1990
Shale	1990 – 2108
Red Rock	

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-017-06027

Farm name: Dotson, Randal J. & Sandra Operator Well No.: Trout Unit 1H

LOCATION: Elevation: 880' Quadrangle: Folsom 7.5'

District: McClellan County: Doddridge  
Latitude: 10388' Feet South of 39 Deg. 25 Min. 00 Sec.  
Longitude 11025' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street				
Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft.
Agent: CT Corporation System	13 3/8" 48#	887'	887'	1232 Cu. Ft. Class A
Inspector: Sam Ward	9 5/8" 36#	2790'	2790'	1136 Cu. Ft. Class A
Date Permit Issued: 7/12/2011	5 1/2" 20#	16243'	16243'	3980 Cu. Ft. Class H
Date Well Work Commenced: 7/12/2012				
Date Well Work Completed: 11/19/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7179'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7070' TVD				
Total Measured Depth (ft): 16243' MD				
Fresh Water Depth (ft.): 132'				
Salt Water Depth (ft.): 1160'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 53', 110', 225', 383', 454', 492'				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6929' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 9137 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3800 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shawn  
Signature

1/24/13  
Date

CHIEF OF OFFICE  
JAN 25 2013

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL,

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (R. Swiger South Unit 1H, API# 47-017-05692). Please reference the wireline logs submitted with Form WR-35 for R. Swiger South Unit 1H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7285'-16182' (1872 holes)

Frac'd w/ 13,500 gals 15% HCL Acid, 190,877 bbls Slick Water carrying 964,300# 100 mesh, 3,607,300# 40/70 and 1,935,900# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est	1763'	1845'
Big Injun est	1846'	2294'
Gantz Sand est	2295'	2415'
Fifty Foot Sandstone est	2416'	2501'
Gordon est	2502'	2808'
Fifth Sandstone est	2809'	2846'
Bayard est	2847'	3604'
Speechley est	3605'	4056'
Balltown est	4057'	4314'
Bradford est	4315'	4789'
Benson est	4790'	5142'
Alexander est	5143'	5948'
Elk est	5949'	5954'
Rhinestreet	5955'	6405'
Sycamore	6406'	6623'
Middlesex	6624'	6729'
Genundewa	6730'	6778'
Burket	6779'	6805'
Tully	6806'	6879'
Hamilton	6880'	6928'
Marcellus	6929'	7070' TVD

Received  
Office of Oil & Gas  
2013

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-017-06028

Farm name: Dotson, Rendal J. & Sandra

Operator Well No.: Trout Unit 2H

LOCATION: Elevation: 880'

Quadrangle: Folsom 7.5'

District: McClellan

County: Doddridge

Latitude: 10379' Feet South of 39 Deg. 25 Min. 00 Sec.

Longitude 11009' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street Denver, CO 80202	26" 94#	23'	23'	118 Cu. Ft.
Agent: CT Corporation System	20" 133#	40'	40'	38 Cu. Ft. Class A
Inspector: Sam Ward	13 3/8" 48#	844'	844'	1172 Cu. Ft. Class A
Date Permit Issued: 7/12/2011	9 5/8" 36#	2765'	2765'	1197 Cu. Ft. Class A
Date Well Work Commenced: 7/29/2012	5 1/2" 20#	16257'	16257'	3991 Cu. Ft. Class H
Date Well Work Completed: 12/1/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7396'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7091' TVD				
Total Measured Depth (ft): 16243' MD				
Fresh Water Depth (ft.): est. 132'				
Salt Water Depth (ft.): 880'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): est. 53', 110', 225', 383', 454', 492'				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6946' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 8844 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3800 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1/24/13  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL

This is a subsequent well. Artero only runs wireline logs on the first well on a multi-well pad (R. Swiger South Unit 1H, API# 47-017-05692). Please reference the wireline logs submitted with Form WR-35 for R. Swiger South Unit 1H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7517'-16191' (1800 holes)

Frac'd w/ 13,000 gals 15% HCL Acid, 187,763 bbls Slick Water carrying 966,600# 100 mesh, 3,606,200# 40/70 and 2,121,100# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est	1763'	1845'
Big Injun est	1846'	2294'
Gantz Sand est	2295'	2415'
Fifty Foot Sandstone est	2416'	2501'
Gordon est	2502'	2808'
Fifth Sandstone est	2809'	2846'
Bayard est	2847'	3604'
Speechley est	3605'	4056'
Balltown est	4057'	4314'
Bradford est	4315'	4885'
Benson	4886'	5153'
Alexander	5154'	5357'
Elk	5358'	5960'
Rhinestreet	5961'	6403'
Sycamore	6404'	6631'
Middlesex	6632'	6790'
Burket	6791'	6817'
Tully	6818'	6892'
Hamilton	6893'	6945'
Marcellus	6946'	7091' TVD

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JAN 21 2015

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/14/2013  
API #: 47-017-06079

Farm name: Davis, Jonathan Operator Well No.: Valentine Unit 2H

LOCATION: Elevation: 1159' Quadrangle: West Union 7.5'

District: Central County: Doddridge  
Latitude: 10.547' Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude 12.378' Feet West of 80 Deg. 47 Min. 30 Sec.

Company: Antero Resources Appalachian Corp.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft Class A
Agent: CT Corporation System	13-3/8" 48#	664'	664'	922 Cu. Ft Class A
Inspector: Sam Ward	9-5/8" 36#	2610'	2610'	1063 Cu. Ft Class A
Date Permit Issued: 3/30/2012	5-1/2" 20#	14321'	14321'	3506 Cu. Ft Class H
Date Well Work Commenced: 6/29/2012				
Date Well Work Completed: 10/22/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2-3/8" 4.7#	7134'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6816' TVD				
Total Measured Depth (ft): 14321' MD				
Fresh Water Depth (ft.): est. 161', 286'				
Salt Water Depth (ft.): est. 780', 837'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): est. 824', 828'				
Void(s) encountered (N/Y) Depth(s) No, N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6680' TVD (Top)

Gas: Initial open flow ----- MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow WOPL MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after ----- Hours

Second producing formation ----- Pay zone depth (ft) -----

Gas: Initial open flow ----- MCF/d Oil: Initial open flow ----- Bbl/d

Final open flow ----- MCF/d Final open flow ----- Bbl/d

Time of open flow between initial and final tests ----- Hours

Static rock Pressure ----- psig (surface pressure) after ----- Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shawn Ki  
Signature

1/24/13  
Date

Received  
Office of Oil and Gas  
JAN 21 2013

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Valentine Unit 1H, API# 47-017-06083). Please reference the wireline logs submitted with Form WR-35 for Valentine Unit 1H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7241'-14,255' MD (1416 holes)

Frac'd w/ 11,000 gals 15% HCL Acid, 154,773 bbls Slick Water carrying 811,000# 100 mesh,  
2,811,700# 40/70 and 1,590,000# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est.	2,066'	2,176'
Big Injun est.	2,177'	2,574'
Gantz Sand est.	2,575'	2,717'
Fifty Foot Sandstone est.	2,718'	2,808'
Gordon est.	2,809'	3,122'
Fifth Sandstone est.	3,123'	3,147'
Bayard est.	3,148'	3,911'
Speechley est.	3,912'	4,176'
Balltown est.	4,177'	4,621'
Bradford est.	4,622'	5,063'
Benson est.	5,064'	5,324'
Alexander est.	5,325'	5,507'
Elk est.	5,508'	6,004'
Rhinestreet	6,005'	6,313'
Sycamore	6,314'	6,484'
Middlesex	6,485'	6,610'
Burket	6,611'	6,670'
Tully	6,671'	6,679'
Marcellus	6,680'	6,818' TVD



State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/24/2013  
API #: 47-017-06083

Farm name: Davis, Jonathan Operator Well No.: Valentine Unit 1H

LOCATION: Elevation: 1159' Quadrangle: West Union 7.5'

District: Central County: Doddridge  
Latitude: 10.556' Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude 12.382' Feet West of 80 Deg. 47 Min. 30 Sec.

Company: Antero Resources Appalachian Corp.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street				
Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft Class A
Agent: CT Corporation System	13-3/8" 48#	670'	670'	931 Cu. Ft Class A
Inspector: Sam Ward	9-5/8" 36#	2626'	2626'	1450 Cu. Ft Class A
Date Permit Issued: 5/23/2012	5-1/2" 20#	14210'	14210'	3471 Cu. Ft Class H
Date Well Work Commenced: 6/29/2012				
Date Well Work Completed: 10/17/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2-3/8" 4.7#	6665'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6817' TVD				
Total Measured Depth (ft): 14210' MD				
Fresh Water Depth (ft.): est. 161', 286'				
Salt Water Depth (ft.): est. 780', 837'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): est. 824', 828'				
Void(s) encountered (N/Y) Depth(s) No, N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6673' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow WOPL MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Sam Ward  
Signature

1/24/13  
Date

Office of Oil and Gas  
2013

Were core samples taken? Yes \_\_\_\_\_ No ☒

Were cuttings caught during drilling? Yes ☒ No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL, Photo Density/

Compensated Neutron/ Gamma Ray and Dual Laterolog Gamma Ray

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7078'-14,143' MD (1428 holes)

Frac'd w/ 11,500 gals 15% HCL Acid, 154,976 bbls Slick Water carrying 778,200# 100 mesh,  
2,603,300# 40/70 and 1,470,000# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime	2,066'	2,176'
Big Injun	2,177'	2,574'
Gantz Sand	2,575'	2,717'
Fifty Foot Sandstone	2,718'	2,808'
Gordon	2,809'	3,122'
Fifth Sandstone	3,123'	3,147'
Bayard	3,148'	3,911'
Speechley	3,912'	4,176'
Balltown	4,177'	4,621'
Bradford	4,622'	5,063'
Benson	5,064'	5,324'
Alexander	5,325'	5,507'
Elk	5,508'	5,998'
Rhinestreet	5,999'	6,306'
Sycamore	6,307'	6,479'
Middlesex	6,480'	6,601'
Burket	6,602'	6,632'
Tully	6,633'	6,672'
Marcellus	6,673'	6,817' TVD

Office of the  
1AN 2 4 2015

REVISED

WR-35  
Rev (9-11)State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well WorkDATE: 11-28-2012  
API #: 47-029-00141Farm name: Allison HNK 3H M Operator Well No.: 834412LOCATION: Elevation: 1275' Quadrange: East Liverpool SouthDistrict: Clay County: Hancock  
Latitude: 1520' Feet South of 40 Deg. 32 Min. 30 Sec.  
Longitude 14600' Feet West of 80 Deg. 32 Min. 30 Sec.Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496				
Oklahoma City, OK 73154-0496	13 3/8"	662'	662'	735 Cu. Ft.
Agent: Eric Gillespie	9 5/8"	1525'	1525'	696 Cu. Ft.
Inspector: Bill Hendershot	5 1/2"	8309'	8309'	2122 Cu. Ft.
Date Permit Issued: 1-18-2012				
Date Well Work Commenced: 4-29-2012				
Date Well Work Completed: 7-30-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 5175' (cement plug @ 3720'-5175')				
Total Measured Depth (ft): 8309'				
Fresh Water Depth (ft.): 500'				
Salt Water Depth (ft.): 795'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 585'				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation West Falls Pay zone depth (ft) 4,550'-5096'Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 1,161\* MCF/d Final open flow 5 Bbl/d \*CalculatedTime of open flow between initial and final tests 239 HoursStatic rock Pressure 3,001\* psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams  
Signature12-3-2012  
Date

Were cuttings caught during drilling? Yes<sup>x</sup> No

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### Perforated Intervals, Fracturing, or Stimulating:

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This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**Well Number and Name: 834412 Allison HNK 3HM**

[illegible]

**Vertical**

<b>Formation/Lithology</b>	<b>TVD Top</b>	<b>MD Top</b>	<b>TVD Bottom</b>	<b>MD Bottom</b>
Pennsylvanian Unconsolidated	0'	0'	615'	615'
Big Injun SS	615'	615'	690'	690'
Shale	690'	690'	1300'	1300'
Berea SS	1300'	1300'	1375'	1375'
Shale	1375'	1375'	3800'	3800'
Java Shale	3800'	3800'	4200'	4200'
West Falls Fm.	4200'	4200'	4950'	4950'
Tully Limestone	4950'	4950'	4988'	4988'
Hamilton Shale	4988'	4988'	5070'	5070'
Marcellus Shale	5070'	5070'	5100'	5100'
Onondaga Limestone	5100'	5100'		
Pilot TD			5175'	5175'

**Horizontal (from  
Mudlogs)**

Pennsylvanian Unconsolidated	0'	0'	615'	615'
Big Injun SS	615'	615'	690'	690'
Shale	690'	690'	1300'	1300'
Berea SS	1300'	1300'	1375'	1375'
Shale	1375'	1375'	3800'	3800'
Java Shale	3800'	3800'	4200'	4200'
West Falls Fm.	4550'	5096'		
Well TD			4618'	8254'
Tully Limestone	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated
Hamilton Shale	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated
Marcellus Shale	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated
Onondaga Limestone	Not Penetrated	Not Penetrated	Not Penetrated	Not Penetrated

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operators Report of Well Work

Date: September 5, 2007  
API #: 4703304839-RW

LOCATION

Farm Name: Beth Wilson Operators well name: Rector-3 (Re-Work)  
Elevation: 1103 Quadangle: Wolf Summit District: Clark County: Harrison  
Latitude: 14750 Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude: 6230 Feet West of 80 Deg. 22 Min. 30 Sec.

COMPANY

Reed Gas, Inc.  
1314 Virginia Street East  
Charleston, WV 25301

Operator #: 41350

Agent: James W. Reed Jr.  
Inspector: Tim Bennett  
Date Permit Issued: 8/29/08  
Date Well Work Commenced: 8/7/09  
Date Well Work Completed: 9/5/09  
Total Depth (feet): 6940  
Rotary Rig: X Cable Rig:

Casing & Tubing	Used in Drilling	Left in Well	Cement Data
13 3/8"	20	20 Ft	Sks Cement Top
9 5/8"	280	280 Ft	110 To Surface
7"	1467	1467 Ft	200 To Surface
4 1/2"	6928	6928 Ft	260 To Surface
Tubing		Ft	Type

Verbal Plugging  
Date Permission Granted:

Fresh Water Depth (feet):  
Salt Water Depth (feet): 504  
Is coal being mined in area? No

OPEN FLOW DATA

1 <sup>st</sup> Producing formation:	Benson	Pay zone depth (ft): 4224 to 4453
Gas: Initial Open Flow:	MCF/d	Oil: Initial Open Flow: Bbl/d
Final Open Flow:	* See Remarks MCF/d	Final Open Flow: Bbl/d
Time of open flow between initial and final tests:	hours	
Static rock pressure:	after hours	
2 <sup>nd</sup> Producing formation:	Balltown	Pay zone depth (ft): 3215 to 3237
Gas: Initial Open Flow:	MCF/d	Oil: Initial Open Flow: Bbl/d
Final Open Flow:	* See Remarks MCF/d	Final Open Flow: Bbl/d
Time of open flow between initial and final tests:	hours	
Static rock pressure:	after hours	
3 <sup>rd</sup> Producing formation:	Speechley	Pay zone depth (ft): 2913 to 3009
Gas: Initial Open Flow:	MCF/d	Oil: Initial Open Flow: Bbl/d
Final Open Flow:	* See Remarks MCF/d	Final Open Flow: Bbl/d
Time of open flow between initial and final tests:	hours	
Static rock pressure:	after hours	

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FEB 05 2013

WV Department of  
Environmental Protection

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGIC RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: \_\_\_\_\_  
By: James W. Reed, Jr.  
Date: \_\_\_\_\_



State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-033-05584

Farm name: Hurst, Clara Mae, et al Operator Well No.: Findley Unit 1H

LOCATION: Elevation: 1172' Quadrangle: West Milford

District: Union County: Harrison  
Latitude: 10571' Feet South of 39 Deg. 12 Min. 30 Sec.  
Longitude 7815' Feet West of 80 Deg. 27 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>1625 17th Street</u>				
<u>Denver, CO 80202</u>	<u>20" 94#</u>	<u>40'</u>	<u>40'</u>	<u>38 Cu. Ft.</u>
<u>Agent: CT Corporation System</u>	<u>13 3/8" 48#</u>	<u>587'</u>	<u>587'</u>	<u>815 Cu. Ft. Class A</u>
<u>Inspector: Tristan Jenkins</u>	<u>9 5/8" 36#</u>	<u>2692'</u>	<u>2692'</u>	<u>1096 Cu. Ft. Class A</u>
<u>Date Permit Issued: 1/11/2012</u>	<u>5 1/2" 20#</u>	<u>15630'</u>	<u>15630'</u>	<u>3841 Cu. Ft. Class H</u>
<u>Date Well Work Commenced: 3/9/2012</u>				
<u>Date Well Work Completed: 12/2/2012</u>				
<u>Verbal Plugging: N/A</u>				
<u>Date Permission granted on: N/A</u>	<u>2 3/8" 4.7#</u>	<u>7239'</u>		
<u>Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/></u>				
<u>Total Vertical Depth (ft): 7507' TVD (deepest point drilled)</u>				
<u>Total Measured Depth (ft): 7157' TVD (BHL), 15634' MD</u>				
<u>Fresh Water Depth (ft.): 301'</u>				
<u>Salt Water Depth (ft.): 1053'</u>				
<u>Is coal being mined in area (N/Y)? N</u>				
<u>Coal Depths (ft.): 80', 144', 200'</u>				
<u>Void(s) encountered (N/Y) Depth(s) None</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7002' TVD (Top)

Gas: Initial open flow ----- MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 6026 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after ----- Hours

Second producing formation ----- Pay zone depth (ft) -----

Gas: Initial open flow ----- MCF/d Oil: Initial open flow ----- Bbl/d

Final open flow ----- MCF/d Final open flow ----- Bbl/d

Time of open flow between initial and final tests ----- Hours

Static rock Pressure ----- psig (surface pressure) after ----- Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shan A.  
Signature

1/24/13  
Date

OFFICIAL COPY  
JAN 24 2013

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL,

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Saylor Unit 2H, API# 47-033-05583). Please reference the wireline logs submitted with Form WR-35 for Saylor Unit 2H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7389'-15565' (1,728 holes)

Frac'd w/ 12,500 gals 15% HCL Acid, 175,971 bbls Slick Water carrying 894,200# 100 mesh, 3,245,300# 40/70 and 1,889,600# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime	1682'	2149'
Fifty Foot Sandstone	2150'	2246'
Gordon	2247'	2533'
Fifth Sandstone	2534'	2590'
Bayard	2591'	3228'
Speechley	3229'	3482'
Balltown	3483'	4003'
Bradford	4004'	4621'
Benson	4622'	4850'
Alexander	4851'	5002'
Elk	5003'	6389'
Sycamore	6390'	6610'
Middlesex	6611'	6797'
Burket	6798'	6824'
Tully	6825'	6936'
Hamilton	6937'	7001'
Marcellus	7002'	7507' TVD

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WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-033-05585

Farm name: Hurst, Clara Mae, et al Operator Well No.: Findley Unit 2H

LOCATION: Elevation: 1172' Quadrangle: West Milford

District: Union County: Harrison  
Latitude: 10561' Feet South of 39 Deg. 12 Min. 30 Sec.  
Longitude 7817' Feet West of 80 Deg. 27 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street				
Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft.
Agent: CT Corporation System	13 3/8" 48#	628'	628'	872 Cu. Ft. Class A
Inspector: Tristan Jenkins	9 5/8" 36#	2780'	2780'	1132 Cu. Ft. Class A
Date Permit Issued: 1/25/2012	5 1/2" 20#	15510'	15510'	3781 Cu. Ft. Class H
Date Well Work Commenced: 3/9/2012				
Date Well Work Completed: 11/19/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7262'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7145' TVD				
Total Measured Depth (ft): 15510' MD				
Fresh Water Depth (ft.): 195'				
Salt Water Depth (ft.): 726', 1090				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 80', 144', 200'				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6977' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 9175 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shane  
Signature

1/24/13  
Date

Received  
Office of Oil & Gas  
JAN 25 2013

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL,

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Saylor Unit 2H, API# 47-033-05583). Please reference the wireline logs submitted with Form WR-35 for Saylor Unit 2H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7298'-15444' (1,728 holes)

Frac'd w/ 12,500 gals 15% HCL Acid, 173,252 bbls Slick Water carrying 841,100# 100 mesh,  
3,175,300# 40/70 and 1,885,000# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est.	1682'	2149'
Fifty Foot Sandstone est.	2150'	2246'
Gordon est.	2247'	2533'
Fifth Sandstone est.	2534'	2590'
Bayard est.	2591'	3228'
Speechley est.	3229'	3482'
Balltown est.	3483'	4003'
Bradford est.	4004'	4621'
Benson est.	4622'	4850'
Alexander est.	4851'	5002'
Elk est.	5003'	6389'
Sycamore	6390'	6610'
Middlesex	6611'	6797'
Burket	6798'	6824'
Tully	6825'	6936'
Hamilton	6937'	7001'
Marcellus	7002'	7145' TVD

Received  
Office of Oil & Gas  
JAN 25 2018

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/24/2013  
API #: 47-033-05591

Farm name: Mountain Lakes Limited Operator Well No.: Kermit Unit 3H

LOCATION: Elevation: 1386' Quadrangle: West Milford

District: Union County: Harrison  
Latitude: 3180' Feet South of 39 Deg. 15 Min. 00 Sec.  
Longitude 9628' Feet West of 80 Deg. 27 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street				
Denver, CO 80202	20" 94#	41'	41'	38 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	543'	543'	754 Cu. Ft. Class A
Inspector: Tristan Jenkins	9 5/8" 36#	2571'	2571'	1047 Cu. Ft. Class A
Date Permit Issued: 1/24/2012	5 1/2" 23#	14172'	14172'	3477 Cu. Ft. Class H
Date Well Work Commenced: 6/20/2012				
Date Well Work Completed: 11/13/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7161'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7179' TVD				
Total Measured Depth (ft): 14172' MD				
Fresh Water Depth (ft.): est. 50', 90' 111'				
Salt Water Depth (ft.): None available				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 270', 545', 645'				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7141' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 4811 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

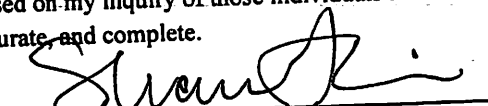
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1/24/13  
Date

Office of Oil and Gas  
JAN 25 2013

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL,  
Photo Density/ Compensated Neutron/ Gamma Ray and Dual Laterolog Gamma Ray

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7580'-14406' (1368 holes)

Frac'd w/ 9,576 gals 15% HCL Acid, 135,719 bbls Slick Water carrying 699,100# 100 mesh,  
2,712,240# 40/70 and 1,644,440# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime	1756'	1863'
Big Injun	1864'	2149'
Gantz Sand	2150'	2251'
Fifty Foot Sandstone	2252'	2369'
Gordon	2370'	2660'
Fifth Sandstone	2661'	2715'
Bayard	2716'	3346'
Speechley	3347'	3587'
Balltown	3588'	4098'
Bradford	4099'	4677'
Benson	4678'	4873'
Alexander	4874'	5225'
Elk	5226'	6748'
Sonyea	6749'	6761'
Middlesex	6762'	6832'
West River Shale	6833'	6882'
Genundewa	6883'	6941'
Burket	6942'	6949'
Tully	6950'	7064'
Hamilton	7065'	7140'
Marcellus	7141'	7179' TVD

COPIES OF LOGS  
JAN 24 2013

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-033-05593

Farm name: Mountain Lakes Limited

Operator Well No.: Kermit Unit 1H

LOCATION: Elevation: 1386'

Quadrangle: West Milford

District: Union

County: Harrison

Latitude: 3201' Feet South of 39 Deg. 15 Min. 00 Sec.

Longitude 9633' Feet West of 80 Deg. 27 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address: 1625 17th Street	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 48#	529'	529'	735 Cu. Ft. Class A
Inspector: Tristan Jenkins	9 5/8" 36#	2580'	2580'	1050 Cu. Ft. Class A
Date Permit Issued: 2/28/2012	5 1/2" 23#	13959'	13959'	3415 Cu. Ft. Class H
Date Well Work Commenced: 7/24/2012				
Date Well Work Completed: 11/25/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7331'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7204' TVD (deepest point drilled)				
Total Measured Depth (ft): 7122' TVD (BHL), 13959' MD				
Fresh Water Depth (ft.): est. 90'				
Salt Water Depth (ft.): None available				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 191', 274', 306'				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7166' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 9053 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_


Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of perjury that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1/24/13  
Date

UNIC  
JAN 24 2013



Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Kermit Unit 3H, API# 47-033-05591). Please reference the wireline logs submitted with Form WR-35 for Kermit Unit 3H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7490'-13893' (1344 holes)

Frac'd w/ 10,080 gals 15% HCL Acid, 133,786 bbls Slick Water carrying 693,308# 100 mesh,  
2,612,985# 40/70 and 1,641,350# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est.	1756'	1863'
Big Injun est.	1864'	2149'
Gantz Sand est.	2150'	2251'
Fifty Foot Sandstone est.	2252'	2369'
Gordon est.	2370'	2660'
Fifth Sandstone est.	2661'	2715'
Bayard est.	2716'	3346'
Speechley est.	3347'	3587'
Balltown est.	3588'	4098'
Bradford est.	4099'	4677'
Benson est.	4678'	4873'
Alexander est.	4874'	5225'
Elk est.	5226'	6470'
Sycamore	6471'	6749'
Sonyea	6750'	6825'
West River Shale	6826'	6843'
Burket	6944'	6969'
Tully	6970'	7085'
Hamilton	7086'	7165'
Marcellus	7166'	7204' TVD

Received  
Office of Oil & Gas

JAN 2 2010

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-033-05594

Farm name: Mountain Lakes Limited Operator Well No.: Kermit Unit 2H

LOCATION: Elevation: 1386' Quadrangle: West Milford

District: Union County: Harrison  
Latitude: 31° 39' Feet South of 39 Deg. 15 Min. 00 Sec.  
Longitude: 96° 22' Feet West of 80 Deg. 27 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street	20" 94#	41'	41'	38 Cu. Ft. Class A
Denver, CO 80202	13 3/8" 48#	529'	529'	735 Cu. Ft. Class A
Agent: CT Corporation System	9 5/8" 36#	2589'	2589'	1658 Cu. Ft. Class A
Inspector: Tristan Jenkins	5 1/2" 23#	13805'	13805'	3370 Cu. Ft. Class H
Date Permit Issued: 2/28/2012				
Date Well Work Commenced: 6/18/2012				
Date Well Work Completed: 11/18/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7276'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7198' TVD (deepest point drilled)				
Total Measured Depth (ft): 7157' TVD (BHL), 13805' MD				
Fresh Water Depth (ft.): est. 50', 90', 111'				
Salt Water Depth (ft.): None available				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 270', 545', 645'				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7159' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 7521 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

1/24/13  
Date

JAN 2

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Kermit Unit 3H, AP# 47-033-05591). Please reference the wireline logs submitted with Form WR-35 for Kermit Unit 3H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7328'-13739' (1320 holes)

Frac'd w/ 10,584 gals 15% HCL Acid, 132,394 bbls Slick Water carrying 680,390# 100 mesh,  
2,600,934# 40/70 and 1,603,910# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est.	1756'	1863'
Big Injun est.	1864'	2149'
Gantz Sand est.	2150'	2251'
Fifty Foot Sandstone est.	2252'	2369'
Gordon est.	2370'	2660'
Fifth Sandstone est.	2661'	2715'
Bayard est.	2716'	3346'
Speechley est.	3347'	3587'
Balltown est.	3588'	4098'
Bradford est.	4099'	4677'
Benson est.	4678'	4873'
Alexander est.	4874'	5225'
Elk est.	5226'	6749'
Sonyea	6750'	6755'
Middlesex	6756'	6831'
West River Shale	6832'	6831'
Burket	6932'	6959'
Tully	6960'	7084'
Hamilton	7085'	7158'
Marcellus	7159'	7198' TVD

Received  
Office of Oil & Gas

JAN 2

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/14/2013  
API #: 47-033-05638

Farm name: Lowe, Francis and Nancy Operator Well No.: Ora Unit 1H

LOCATION: Elevation: 1201' Quadrangle: West Milford

District: Union County: Harrison  
Latitude: 87°3' Feet South of 39 Deg. 15 Min. 00 Sec.  
Longitude 54°1' Feet West of 80 Deg. 25 Min. 00 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street				
Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft.
Agent: CT Corporation System	13 3/8" 48#	593'	593'	824 Cu. Ft. Class A
Inspector: Tristan Jenkins	9 5/8" 36#	2554'	2554'	1040 Cu. Ft. Class A
Date Permit Issued: 6/14/2012	5 1/2" 20#	16549'	16549'	4135 Cu. Ft. Class H
Date Well Work Commenced: 6/25/2012				
Date Well Work Completed: 11/10/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.7#	7135'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7011' TVD				
Total Measured Depth (ft): 16565' MD				
Fresh Water Depth (ft.): 40'				
Salt Water Depth (ft.): None available				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): Pad constructed on reclaimed PHG strip bench				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6853' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 11640 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3600 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shanna Peck  
Signature

1/14/13  
Date

JAN 23 2013

Were core samples taken? Yes \_\_\_\_\_ No ☒

Were cuttings caught during drilling? Yes ☒ No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Wagner Unit 1H, API# 47-033-05465). Please reference the wireline logs submitted with Form WR-35 for Wagner Unit 1H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7242'-16483' (2160 holes)

Frac'd w/ 17,750 gals 15% HCL Acid, 194,348 bbls Slick Water carrying 954,909# 100 mesh,  
3,601,801# 40/70 and 2,152,707# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est.	1453'	1564'
Big Injun est.	1565'	1972'
Fifty Foot Sandstone est.	1973'	2115'
Gordon est.	2116'	2382'
Fifth Sandstone est.	2383'	2435'
Bayard est.	2436'	3089'
Speechley est.	3090'	3305'
Balltown est.	3306'	3815'
Bradford est.	3816'	4482'
Benson est.	4483'	4786'
Alexander est.	4787'	5013'
Elk est.	5014'	5541'
Rhinestreet est.	5542'	6428'
Middlesex	6429'	6532'
West River Shale	6533'	6628'
Burket	6629'	6656'
Tully	6657'	6852'
Marcellus	6853'	7011' TVD

Antero Energy Services  
JAN 4

FILED

Date: 10/6/2010  
API # 47-097-03689

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm Name: Dale Winfree 3HOperator Well No.: 831580LOCATION Elevation: 1961'District: BanksLatitude: 6350 ft South of 38° 50' 00"Longitude: 5600 ft West of 80° 17' 30"Quadrangle: Rock CaveCounty: Upshur

Company: Chesapeake Appalachia, L.L.C.  
P.O. Box 18496  
OKC, OK 73154-0496

Agent: Eric Gillespie

Inspector: Bill Hatfield

Date Permit Issued: 11/12/2009

Date Well work commenced: 1/15/2010

Date Well Work completed: 9/23/2010

Verbal Plugging Permission

Granted on / /

Rotary ☒ Cable ☐ Rig

Total Depth (ft): 11,446' TVD (ft): 7214'

Fresh Water Depth (ft): 475'

Salt Water Depth (ft.): 1,161'

Is coal being mined in area (Yes ☐ No ☒)

Coal Depths (ft): None

Was this well logged and plugged back?

Yes ☐ No ☐ if yes -  
depth cement plug set \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20'	70'	70'	Driven
13 3/8"	602'	602'	670 CF
9 5/8"	1853'	1853'	814 CF
7"	7550'	7550'	632 CF
4 1/2" liner	11,446'	11,446'	483 CF

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Office of Oil & Gas

JAN 17 2013

WV Department of  
Environmental Protection

## Open Flow Data

1<sup>st</sup> Producing Formation

Pay Zone Depth 7,483 ft to 11,325 ft

Gas: Initial Open Flow 2,276 Mcf/day Oil: Initial Open Flow bbl/day  
Final Open Flow N/A Mcf/day Final Open Flow bbl/day  
Time of Open Flow between Initial and Final Tests In hours  
Line hours  
Static Rock Pressure 3,246 psig after N/A hours

2<sup>nd</sup> Producing Formation

Pay Zone Depth ft to ft

Gas: Initial Open Flow N/A Mcf/day Oil: Initial Open Flow bbl/day  
Final Open Flow N/A Mcf/day Final Open Flow bbl/day  
Time of Open Flow between Initial and Final Tests hours  
Static Rock Pressure N/A psig after hours

3<sup>rd</sup> Producing Formation

Pay Zone Depth ft to ft

Gas: Initial Open Flow N/A Mcf/day Oil: Initial Open Flow bbl/day  
Final Open Flow N/A Mcf/day Final Open Flow bbl/day  
Time of Open Flow between Initial and Final Tests hours  
Static Rock Pressure N/A psig after hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Chesapeake Energy  
Well No.: 831580

Perforated Intervals

1 <sup>st</sup> Stage	Marcellus	50	holes from	11,083 ft to	11,325 ft
2 <sup>nd</sup> Stage	Marcellus	50	holes from	10,783 ft to	11,025 ft
3 <sup>rd</sup> Stage	Marcellus	50	holes from	10,478 ft to	10,725 ft
4 <sup>th</sup> Stage	Marcellus	50	holes from	10,178 ft to	10,425 ft
5 <sup>th</sup> Stage	Marcellus	50	holes from	9,878 ft to	10,125 ft
6 <sup>th</sup> Stage	Marcellus	50	holes from	9,588 ft to	9,825 ft
7 <sup>th</sup> Stage	Marcellus	50	holes from	9,288 ft to	9,525 ft
8 <sup>th</sup> Stage	Marcellus	50	holes from	8,983 ft to	9,225 ft
9 <sup>th</sup> Stage	Marcellus	50	holes from	8,683 ft to	8,925 ft
10 <sup>th</sup> Stage	Marcellus	50	holes from	8,383 ft to	8,625 ft
11 <sup>th</sup> Stage	Marcellus	50	holes from	8,083 ft to	8,325 ft
12 <sup>th</sup> Stage	Marcellus	50	holes from	7,783 ft to	8,025 ft
13 <sup>th</sup> Stage	Marcellus	50	holes from	7,483 ft to	7,725 ft

Fracturing / Stimulation

1 <sup>st</sup> Stage	Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl	Breakdown Pressure 6,941 psi	
	Average Rate 80 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,653 psi   MTP 8,990 psi	
	Total Fluid 7,104 bbl	Total Nitrogen 0 scf	Total Sand 82,023 lb of 100 mesh
			Total Sand 269,435 lb of 40/70
	ISIP 2,220 psi	5 min 0 psi	
2 <sup>nd</sup> Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,584 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,635 psi   MTP 9,005 psi	
	Total Fluid 8,961 bbl	Total Nitrogen 0 scf	Total Sand 80,481 lb of 100 mesh
			Total Sand 322,715 lb of 40/70
	ISIP 3,734 psi	5 min 2,908 psi	
3 <sup>rd</sup> Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,674 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,636 psi   MTP 8,640 psi	
	Total Fluid 9,218 bbl	Total Nitrogen 0 scf	Total Sand 80,306 lb of 100 mesh
			Total Sand 317,033 lb of 40/70
	ISIP 0 psi	5 min 2,932 psi	
4 <sup>th</sup> Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 8,019 psi	
	Average Rate 83 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,634 psi   MTP 9,120 psi	
	Total Fluid 9,634 bbl	Total Nitrogen 0 scf	Total Sand 81,000 lb of 100 mesh
			Total Sand 322,136 lb of 40/70
	ISIP 3,526 psi	5 min 2,987 psi	
5 <sup>th</sup> Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,401 psi	
	Average Rate 86 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,252 psi   MTP 8,647 psi	
	Total Fluid 8,724 bbl	Total Nitrogen 0 scf	Total Sand 80,718 lb of 100 mesh
			Total Sand 321,655 lb of 40/70
	ISIP 3,743 psi	5 min 3,138 psi	
6 <sup>th</sup> Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,383 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,560 psi   MTP 8,874 psi	
	Total Fluid 8,725 bbl	Total Nitrogen 0 scf	Total Sand 80,307 lb of 100 mesh
			Total Sand 321,175 lb of 40/70
	ISIP 3,840 psi	5 min 3,173 psi	

Leak Well: 3H

HORIZONTAL WELL (No pilot hole associated with this pad)				
Maximum TVD of wellbore:	7214 ft TVD @ 11446 ft MD			
Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS and SH	0	0	530	530
SS and SH	530	530	1556	1556
Big Lime	1556	1556	1600	1600
SS and SILTSTN	1600	1600	1767	1767
Big Injun	1767	1767	1810	1810
SS and SILTSTN	1810	1810	2590	2590
SILTSTN	2590	2590	3750	3750
SILTSTN and SS	3750	3750	5250	5250
SS and SH	5250	5250	5475	5475
SILTSTN and SH	5475	5475	6700	6670
SH and LS	6700	6670	7090	7052
Geneseo	7090	7052	7136	7085
Tully	7136	7085	7173	7109
Hamilton	7173	7109	7346	7193
Marcellus	7346	7193	7475	7230
Purcell	7475	7230		
End of Well			11446	7214



Date: 10/20/2010  
API # 47-097-03690

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm Name: Dale Winfree 5H

Operator Well No.: 831572

LOCATION Elevation: 1961'  
District: Banks  
Latitude: 6337 ft South of 38° 50' 00"  
Longitude: 5595 ft West of 80° 17' 30"

Quadrangle: Rock Cave  
County:

Company: Chesapeake Appalachia, L.L.C.  
P.O. Box 18496  
OKC, OK 73154-0496

Agent: Eric Gillespie  
Inspector: Bill Hatfield  
Date Permit Issued: 11/10/2009  
Date Well work commenced: 1/29/2010  
Date Well Work completed: 9/25/2010  
Verbal Plugging Permission  
Granted on / /  
Rotary ☒ Cable ☐ Rig  
Total Depth (ft): 11995 TVD (ft): 7233'  
Fresh Water Depth (ft): 475'  
Salt Water Depth (ft): NA  
Is coal being mined in area (Yes ☐ No ☒)  
Coal Depths (ft): None  
Was this well logged and plugged back?  
Yes ☐ No ☐ if yes -  
depth cement plug set \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	60'	60'	Driven
13 3/8"	600'	600'	541 CF
9 5/8"	1858'	1858'	937 CF
7"	7750'	7750'	683 CF
4 1/2" liner	11,995	11,995	584 CF

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Office of Oil & Gas

JAN 17 2013

Open Flow Data WV Department of  
Environmental Protection

1<sup>st</sup> Producing Formation Pay Zone Depth 7,549 ft to 11,869 ft

Gas: Initial Open Flow	1,611 Mcf/day	Oil: Initial Open Flow	bbl/day
Final Open Flow	N/A Mcf/day	Final Open Flow	bbl/day
Time of Open Flow between Initial and Final Tests	In	hours	
	Line	hours	
Static Rock Pressure	3,255 psig after N/A		

2<sup>nd</sup> Producing Formation Pay Zone Depth ft to ft

Gas: Initial Open Flow	N/A Mcf/day	Oil: Initial Open Flow	bbl/day
Final Open Flow	N/A Mcf/day	Final Open Flow	bbl/day
Time of Open Flow between Initial and Final Tests		hours	
Static Rock Pressure	N/A psig after	hours	

3<sup>rd</sup> Producing Formation Pay Zone Depth ft to ft

Gas: Initial Open Flow	N/A Mcf/day	Oil: Initial Open Flow	bbl/day
Final Open Flow	N/A Mcf/day	Final Open Flow	bbl/day
Time of Open Flow between Initial and Final Tests		hours	
Static Rock Pressure	N/A psig after	hours	

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Chesapeake Energy  
Well No.: 831572

Perforated Intervals

1 <sup>st</sup> Stage	Marcellus	50	holes from	11,549 ft to 11,869 ft
2 <sup>nd</sup> Stage	Marcellus	50	holes from	11,149 ft to 11,471 ft
3 <sup>rd</sup> Stage	Marcellus	50	holes from	10,749 ft to 11,071 ft
4 <sup>th</sup> Stage	Marcellus	50	holes from	10,349 ft to 10,671 ft
5 <sup>th</sup> Stage	Marcellus	50	holes from	9,951 ft to 10,271 ft
6 <sup>th</sup> Stage	Marcellus	50	holes from	9,543 ft to 9,871 ft
7 <sup>th</sup> Stage	Marcellus	50	holes from	9,149 ft to 9,471 ft
8 <sup>th</sup> Stage	Marcellus	50	holes from	8,749 ft to 9,075 ft
9 <sup>th</sup> Stage	Marcellus	50	holes from	8,349 ft to 8,671 ft
10 <sup>th</sup> Stage	Marcellus	50	holes from	7,949 ft to 8,270 ft
11 <sup>th</sup> Stage	Marcellus	50	holes from	7,549 ft to 7,871 ft

Fracturing / Stimulation

1 <sup>st</sup> Stage	Type of Treatment Slickwater	
Total Acid 5,000 Gal of 15% HCl	Breakdown Pressure 6,789 psi	
Average Rate 83 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,506 psi   MTP 9,077 psi	
Total Fluid 8,368 bbl	Total Sand 65,115 lb of 100 mesh	
Total Nitrogen 0 scf	Total Sand 331,227 lb of 40/70	
ISIP 3,986 psi	5 min 2,652 psi	
2 <sup>nd</sup> Stage	Type of Treatment Slickwater	
Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,201 psi	
Average Rate 81 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,428 psi   MTP 8,549 psi	
Total Fluid 7,979 bbl	Total Sand 81,000 lb of 100 mesh	
Total Nitrogen 0 scf	Total Sand 321,507 lb of 40/70	
ISIP 3,200 psi	5 min 2,491 psi	
3 <sup>rd</sup> Stage	Type of Treatment Slickwater	
Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 8,180 psi	
Average Rate 74 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,948 psi   MTP 9,121 psi	
Total Fluid 9,257 bbl	Total Sand 80,886 lb of 100 mesh	
Total Nitrogen 0 scf	Total Sand 324,067 lb of 40/70	
ISIP 3,729 psi	5 min 2,789 psi	
4 <sup>th</sup> Stage	Type of Treatment Slickwater	
Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,582 psi	
Average Rate 86 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,021 psi   MTP 9,263 psi	
Total Fluid 9,098 bbl	Total Sand 80,411 lb of 100 mesh	
Total Nitrogen 0 scf	Total Sand 320,057 lb of 40/70	
ISIP 3,650 psi	5 min 2,705 psi	
5 <sup>th</sup> Stage	Type of Treatment Slickwater	
Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,372 psi	
Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,000 psi   MTP 8,994 psi	
Total Fluid 8,464 bbl	Total Sand 80,277 lb of 100 mesh	
Total Nitrogen 0 scf	Total Sand 320,576 lb of 40/70	
ISIP 4,084 psi	5 min 3,000 psi	
6 <sup>th</sup> Stage	Type of Treatment Slickwater	
Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,383 psi	
Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,703 psi   MTP 8,782 psi	
Total Fluid 7,667 bbl	Total Sand 80,380 lb of 100 mesh	
Total Nitrogen 0 scf	Total Sand 323,992 lb of 40/70	
ISIP 3,786 psi	5 min 3,042 psi	

7 <sup>th</sup> Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,870 psi
	Average Rate 89 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,115 psi   MTP 8,774 psi
	Total Fluid 7,383 bbl	Total Nitrogen 0 scf   Total Sand 81,124 lb of 100 mesh
		Total Sand 321,629 lb of 40/70
	ISIP 3,610 psi	5 min 2,801 psi
8 <sup>th</sup> Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,755 psi
	Average Rate 89 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,750 psi   MTP 8,875 psi
	Total Fluid 7,618 bbl	Total Nitrogen 0 scf   Total Sand 80,212 lb of 100 mesh
		Total Sand 320,587 lb of 40/70
	ISIP 3,822 psi	5 min 2,995 psi
9 <sup>th</sup> Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,124 psi
	Average Rate 86 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,810 psi   MTP 8,580 psi
	Total Fluid 7,843 bbl	Total Nitrogen 0 scf   Total Sand 81,078 lb of 100 mesh
		Total Sand 273,959 lb of 40/70
	ISIP 3,818 psi	5 min 2,895 psi
10 <sup>th</sup> Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,988 psi
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,110 psi   MTP 8,239 psi
	Total Fluid 7,472 bbl	Total Nitrogen 0 scf   Total Sand 80,230 lb of 100 mesh
		Total Sand 333,833 lb of 40/70
	ISIP 3,393 psi	5 min 2,472 psi
11 <sup>th</sup> Stage	Type of Treatment Slickwater	
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,109 psi
	Average Rate 89 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,681 psi   MTP 8,546 psi
	Total Fluid 7,717 bbl	Total Nitrogen 0 scf   Total Sand 81,177 lb of 100 mesh
		Total Sand 321,159 lb of 40/70
	ISIP 3,433 psi	5 min 2,809 psi

[illegible]

In Person

**CHESAPEAKE APPALACHIA, LLC**

**By:**

TAL ODEN

Date:

10/20/2010

Dale Winfree SH

HORIZONTAL WELL (No pilot hole associated with this pad)				
Maximum TVD of wellbore:	7235 ft TVD @ 11995 ft MD			
Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS and SH	0	0	530	530
SS and SH	530	530	1556	1556
Big Lime	1556	1556	1600	1600
SS and SILTSTN	1600	1600	1767	1767
Big Injun	1767	1767	1810	1810
SS and SILTSTN	1810	1810	2590	2590
SILTSTN	2590	2590	3750	3750
SILTSTN and SS	3750	3750	5250	5250
SS and SH	5250	5250	5475	5475
SILTSTN and SH	5475	5475	6700	6670
SH and LS	6700	6670	7090	7052
Geneseo	7090	7052	7251	7096
Tully	7251	7096	7285	7120
Hamilton	7285	7120	7424	7206
Marcellus	7424	7206	7523	7249
Purcell	7523	7249		
End of Well			11995	7235

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

COPY

Farm name: DALLISON LUMBER, INC. Operator Well No.: L.S. HOYT 99

LOCATION: Elevation: 1000' Quadrangle: PINE GROVE 7.5'

District: GRANT County: WETZEL  
Latitude: 12,350 Feet south of 39 Deg 37 Min 30 Sec.  
Longitude: 9,700 Feet west of 80 Deg 37 Min 30 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 01/29/10

Well work Commenced: 03/18/10

Well work Completed: 03/19/10

Verbal plugging

permission granted on:

Rotary ☒ Cable ☐ Rig

Total Depth (feet) 2953'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	875'	875'	360 sks
4 1/2"	2903.63'	2903.63'	275 sks

OPEN FLOW DATA \* WATERFLOOD INJECTOR

Producing formation Gordon Pay zone depth (ft) 2873'-2882'  
Gas: Initial open flow \* MCF/d Oil: Initial open flow \* Bbl/d  
Final open flow \* MCF/d Final open flow \* Bbl/d  
Time of open flow between initial and final tests Hours  
Static rock pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)  
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d  
Final open flow MCF/d Final open flow Bbl/d  
Time of open flow between initial and final tests Hours  
Static rock pressure psig (surface pressure) after Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED  
Office of Oil & Gas

For: EAST RESOURCES, INC.

FEB 05 2013

By:

Date:

*Ben Nelson*  
10/15/10

WV Department of  
Environmental Protection

Treatment : Treated perms. 2872'-2882' w/ 250 gals. 15% HCl acid,  
414 bbls cross linked gel, and 16,000 # 20/40 sand.

Well Log : SEE ORIGINAL WELL RECORD

---

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas**

**Well Operator's Report of Well Work**

**COPY**

Farm name: DALLISON LUMBER COMPANY Operator Well No.: L.S. HOYT 110

LOCATION: Elevation: 1,314' Quadrangle: PINE GROVE 7.5'

District: CENTER County: WETZEL  
Latitude: 3,100 Feet south of 39 Deg 37 Min 30 Sec.  
Longitude: 4,500 Feet west of 80 Deg 37 Min 30 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 02/04/10

Well work Commenced: 03/10/10

Well work Completed: 03/12/10

Verbal plugging

permission granted on:

Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_

Total Depth (feet) 3406'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	1275'	1275'	365 sks
4 1/2"	3321.90'	3321.90'	275 sks

**OPEN FLOW DATA \* WATERFLOOD INJECTOR**

Producing formation	Gordon	Pay zone depth (ft)	3273'-3282'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF STRATIGRAPHIC CORRELATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

**Office of Oil & Gas**

FEB 05 2013

For: EAST RESOURCES, INC

By: Ben Nelder

Date: 10/15/10

**WV Department of  
Environmental Protection**



**Treatment :**

Treated perms. 3273'-3282' w/ 250 gals. 15% HCl acid,  
385 bbls cross linked gel, and 17,500 # 20/40 sand.

**Well Log :**

SEE ORIGINAL WELL RECORD

---

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas**

**Well Operator's Report of Well Work**

**COPY**

Farm name: DALLISON LUMBER COMPANY Operator Well No.: L.S. HOYT 109

LOCATION: Elevation: 1,314' Quadrangle: PINE GROVE 7.5'

District: CENTER County: WETZEL  
Latitude: 3,050 Feet south of 39 Deg 37 Min 30 Sec.  
Longitude: 4,550 Feet west of 80 Deg 37 Min 30 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 01/29/10

Well work Commenced: 03/10/10

Well work Completed: 03/12/10

Verbal plugging

permission granted on:

Rotary X Cable        Rig       

Total Depth (feet) 3626' MD

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	1270'	1270'	545 sks
4 1/2"	3485.95'	3485.95'	275 sks

**OPEN FLOW DATA \* WATERFLOOD INJECTOR**

Producing formation	Gordon	Pay zone depth (ft)	3426'-3436'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

**RECEIVED**  
**Office of Oil & Gas**

FEB 05 2013

For: EAST RESOURCES, INC.

By:                     

Date: 20/11/10

**WV Department of  
Environmental Protection**

**Treatment :**

Treated perms. 3426'-3436' w/ 250 gals. 15% HCl acid,  
409 bbls cross linked gel, and 25,200 # 20/40 sand.

**Well Log :**

SEE ORIGINAL WELL RECORD

---

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

**COPY**

Well name: ABLE, PAUL

Operator Well No.: L.E. DULANEY 97

Location: Elevation: 1,300'

Quadrangle: WOLF SUMMIT 7.5'

District: GRANT

County: WETZEL

Latitude: 14,080 Feet south of 39 Deg 37 Min 30 Sec.

Longitude: 10,750 Feet west of 80 Deg 37 Min 30 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 01/22/10

Well work Commenced: 03/08/10

Well work Completed: 03/08/10

Perforation plugging

Perforation granted on:

Rotary ☒ Cable ☐ Rig

Total Depth (feet) 3303'

Fresh water depths (ft) N/A

Alt water depths (ft) N/A

Coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	1123'	1123'	485 sks
4 1/2"	3278'	3278'	275 sks

PEN FLOW DATA

\* WATERFLOOD INJECTOR

Producing formation Gordon Pay zone depth (ft) 3156'-3166'

Gas: Initial open flow \* MCF/d Oil: Initial open flow \* Bbl/d

Final open flow \* MCF/d Final open flow \* Bbl/d

Time of open flow between initial and final tests Hours

Static rock pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock pressure psig (surface pressure) after Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING  
OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED  
GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED  
Office of Oil & Gas

FEB 05 2013

For: EAST RESOURCES, INC.

By:

Date:

*[Signature]*  
9/15/10

Treatment:

W/C

Treated perms. 3156'-3166' w/ 250 gals. 15% HCl acid,  
313 bbls cross linked gel, and 13,300 # 20/40 sand.

Well Log:

SEE ORIGINAL WELL RECORD

---

**Treatment :**

Treated perfs 2856'-2868' w/ 250 gals. 15% HCl,  
420 bbls cross linked gel, and 17,800 # 20/40 sand.

**Well Log :**

SEE ORIGINAL WELL RECORD

---

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

COPY

## Well Operator's Report of Well Work

Farm name: EAST RESOURCES

Operator Well No.: J A DULANEY 279

LOCATION: Elevation: 1,156'

Quadrangle: PINE GROVE 7.5'

District: CENTER

County: WETZEL

Latitude: 1,575 Feet south of 39 Deg 37 Min 30 Sec.

Longitude: 1,050 Feet west of 80 Deg 37 Min 30 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 12/01/09

Well work Commenced: 02/15/10

Well work Completed: 03/19/10

Verbal plugging

permission granted on:

Rotary X Cable        Rig       

Total Depth (feet) 3320'

Fresh water depths (ft)       Salt water depths (ft)       Is coal being mined in area (Y/N)        NCoal Depths (ft):        NA       

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
7"	1126'	1126'	275 sks
4 1/2"	3239.8'	3239.8'	150 sks

## OPEN FLOW DATA

## \* WATERFLOOD PRODUCER

Producing formation Gordon Pay zone (ft) 3085'-3091', 3104'-3116', 3118'-3120'

Gas: Initial open flow        \*        MCF/d Oil: Initial open flow        \*        Bbl/d

Final open flow        \*        MCF/d Final open flow        \*        Bbl/d

Time of open flow between initial and final tests        Hours

Static rock pressure        psig (surface pressure)        after        Hours

Second producing formation        Pay zone depth (ft)       

Gas: Initial open flow        MCF/d Oil: Initial open flow        Bbl/d

Final open flow        MCF/d Final open flow        Bbl/d

Time of open flow between initial and final tests        Hours

Static rock pressure        psig (surface pressure)        after        Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED  
Office of Oil & Gas For: EAST RESOURCES, INC.

FEB 05 2013

By:         
Date: 5/12/10

WV Department of  
Environmental Protection

**Treatment:** Treated perms (3085'-3120') w/ 250 gals. 15% HCl acid, 406 bbls cross linked gel, and 20,500 # 30/50 sand.

**Well Log:**

0	300	Sand and Shale
300	308	Sand
308	340	Shale
340	386	Sand
386	412	Shale
412	428	Sand
428	450	Shale
450	500	Sand
500	595	Shale
595	615	Sand
615	637	Shale
637	661	Sand
661	710	Shale
710	760	Sand
760	764	Shale
764	780	Sand
780	806	Shale
806	1004	Sand
1004	1048	Shale
1048	1060	Sand
1060	1084	Shale
1084	1104	Sand
1104	1125	Shale
1125	1156	Sand
1156	1178	Shale
1178	1185	Sand
1185	1306	Shale
1306	1318	Sand
1318	1534	Shale
1534	1558	Sand
1558	1568	Shale
1568	1584	Sand
1584	1706	Shale
1706	1725	Sand
1725	1736	Shale
1736	1758	Sand
1758	1787	Shale
1787	1837	Sand
1837	1935	Shale
1935	1972	Sand
1972	2002	Shale
2002	2037	Sand
2037	2054	Shale
2054	2116	Sand
2116	2171	Shale
2171	2202	Sand
2202	2214	Shale
2214	2222	Sand
2222	2288	Big Lime
2288	2508	Big Injun
2508	3068	Shale
3068	3094	Gordon Stray
3094	3098	Shale
3098	3122	Gordon
3122	3126	Shale
3126	3139	Sand
3139	3320	Shale
3320		TD



State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

COPY

## Well Operator's Report of Well Work

Farm name: YOHO, JAMES &amp; FLORENCE Operator Well No.: CATHERINE MARTIN 304 REV

LOCATION: Elevation: 1,415' Quadrangle: PINE GROVE 7.5'

District: GRANT

County: WETZEL

Latitude: 10,700 Feet south of 39 Deg 37 Min 30 Sec.

Longitude: 340 Feet west of 80 Deg 37 Min 30 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 06/23/10

Well work Commenced: 07/06/10

Well work Completed: 08/18/10

Verbal plugging

permission granted on:

Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_

Total Depth (feet) 3955'

Fresh water depths (ft) \_\_\_\_\_

Salt water depths (ft) \_\_\_\_\_

Is coal being mined in area (Y/N) NCoal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
7"	1394'	1394'	360 sks
4 1/2"	3938.15'	3938.15'	150 sks

## OPEN FLOW DATA

This well was drilled directionally a distance of 1463' N54 ° W

3770'-3786'

Producing formation Gordon Pay zone depth (ft) 3794'-3834'

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock pressure \_\_\_\_\_ psig (surface pressure) \_\_\_\_\_ after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock pressure \_\_\_\_\_ psig (surface pressure) \_\_\_\_\_ after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

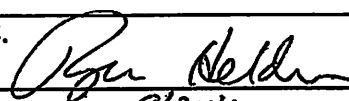
RECEIVED

Office of Oil &amp; Gas For: EAST RESOURCES, INC.

By: \_\_\_\_\_

Date: \_\_\_\_\_

FEB 05 2013

  
9/28/10

**Treatment :**

Treated perforations (3770'-3786', 3794'-3834') w/ 250 gals. 15% HCl, 350 bbls cross linked gel, & 23,700 # 20/40 sand.

**Well Log :**

0	438	Sand and Shale
438	488	Sand
488	956	Sand and Shale
956	1196	Sand
1196	1204	Shale
1204	1216	Sand
1216	1326	Shale
1326	1350	Sand
1350	1707	Shale
1707	1743	Sand
1743	1888	Shale
1888	1916	Sand
1916	1928	Shale
1928	1960	Sand
1960	2032	Shale
2032	2104	Sand
2104	2176	Shale
2176	2208	Sand
2208	2240	Shale
2240	2302	Sand
2302	2322	Shale
2322	2340	Sand
2340	2508	Shale
2508	2529	Sand
2529	2548	Shale
2548	2559	Sand
2559	2718	Big Lime
2718	2967	Big Injun
2967	3750	Shale
3750	3788	Gordon Stray
3788	3792	Shale
3792	3835	Gordon
3835	3857	Shale
3857	3864	Sand
3864	3938	Shale
3938		TD

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

COPY

**Well Operator's Report of Well Work**

Farm name: YOHO, EVELYN

Operator Well No.: WM H CRISWELL 302

LOCATION: Elevation: 969'

Quadrangle: BIG RUN 7.5'

District: GRANT

County: WETZEL

Latitude: 7,240 Feet south of 39 Deg 37 Min 30 Sec.

Longitude: 11,070 Feet west of 80 Deg 35 Min 0 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: DAVID SCRANAGE

Permit Issued: 05/18/10

Well work Commenced: 06/14/10

Well work Completed: 07/21/10

Verbal plugging

permission granted on:

Rotary X Cable      Rig     

Total Depth (feet) 3110'

Fresh water depths (ft) 350'

Salt water depths (ft)     

Is coal being mined in area (Y/N) N

Coal Depths (ft): 775'-785'

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
7"	967'	967'	230 sks
4 1/2"	2739.1'	2739.1'	150 sks

**OPEN FLOW DATA**

Producing formation <u>Gordon</u>		Pay zone depth (ft) <u>2859'-2875'</u> <u>2878.5'-2881.5'</u>
Gas: Initial open flow <u>    </u>	MCF/d <u>    </u>	Oil: Initial open flow <u>    </u> Bbl/d
Final open flow <u>    </u>	MCF/d <u>    </u>	Final open flow <u>    </u> Bbl/d
Time of open flow between initial and final tests <u>    </u>		Hours <u>    </u>
Static rock pressure <u>    </u>	psig (surface pressure) <u>    </u> after <u>    </u>	Hours <u>    </u>
Second producing formation <u>    </u>		Pay zone depth (ft) <u>    </u>
Gas: Initial open flow <u>    </u>	MCF/d <u>    </u>	Oil: Initial open flow <u>    </u> Bbl/d
Final open flow <u>    </u>	MCF/d <u>    </u>	Final open flow <u>    </u> Bbl/d
Time of open flow between initial and final tests <u>    </u>		Hours <u>    </u>
Static rock pressure <u>    </u>	psig (surface pressure) <u>    </u> after <u>    </u>	Hours <u>    </u>

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

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Office of Oil & Gas For: EAST RESOURCES, INC.

FEB 05 2013

By: 

Date: 7/20/10

**Treatment :**

Treated perfs (2859'-2875', 2878.5'-2881.5') w/ 250 gals 15% HCl acid,  
400 bbls cross linked gel, and 25,300# 20/40 sand.

**Well Log :**

0	418	Sand and Shale
418	448	Sand
448	552	Shale
552	700	Sand
700	706	Shale
706	732	Sand
732	748	Shale
748	762	Sand
762	775	Shale
775	785	Coal
785	788	Shale
788	800	Sand
800	868	Shale
868	988	Sand
988	1284	Shale
1284	1303	Sand
1303	1420	Shale
1420	1481	Sand
1481	1490	Shale
1490	1516	Sand
1516	1556	Shale
1556	1590	Sand
1590	1630	Shale
1630	1650	Sand
1650	1686	Shale
1686	1733	Sand
1733	1752	Shale
1752	1788	Sand
1788	1824	Shale
1824	1862	Sand
1862	1876	Shale
1876	1966	Sand
1966	1950	Big Lime
1950	2262	Big Injun
2262	2830	Shale
2830	2852	Gordon Stray
2852	2855	Shale
2855	2882	Gordon
2882	2892	Shale
2892	2896	Sand
2896	3080	Shale
3080		TD

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Page 2 of 2

WELL: 31024

Were core samples taken? Yes ☐ No ☒ Were cuttings caught during drilling? Yes ☐ No ☒  
Were ☐ Electrical, ☐ Mechanical, ☒ or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**PERFORATED INTERVALS, FRACTURING, OR STIMULATING:**

10/27/2010 SUPERIOR RAN BOND LOG. TD - 4843'. TOC - 1520'. PERFORATED FIRST STAGE  
ANGOLA, 4040'-4656', 35 HOLES. WELL READY FRAC.  
10/28/2010 SUPERIOR PERFORATED AND FRACED AS FOLLOWS:  
ANGOLA/JAVA SHALE, 4040'-4656', 35 HOLES, BD 2612#, AVG PRESS 3743',  
750 MSCFN2  
LOWER HURON, 3528'-3808', 39 HOLES, BD 3000#, AVG PRESS 3228',  
750 MSCFN2,  
UPPER HURON, 2878'-3228', 30 HOLES, BD 2515#, AVG PRESS 2848#, 850 MSCFN2  
UPPER HURON, 1998'-2680', 40 HOLES, BD 2550#, AVG PRESS 2357#, 775 MSCFN2  
B&B FLOWED WELL BACK AFTER FRAC.

**FORMATIONS ENCOUNTERED:**

Fill	0	26	Sand&Shale	26	65
RedRock	65	78	Sand&Shale	78	157
Sand & Shell	157	200	RedRock/Shale	200	240
Shell & Sand	240	297	RedRock/Shell	297	324
Shale	324	620	Sand	620	632
Shale	632	690	RedRock/Shale	690	780
Sand	780	796	Sand/Shale	796	1089
RedRock&Shale	1089	1165	Sand&Shale	1165	1231
Coal	1231	1233	Sand/Shale	1233	1390
RedRock/Shale	1390	1425	Shell/Sand	1425	1540
Sand&Shell	1540				

GAMMA RAY/ FORMATION			47-107-01704	
#31024	TOPS			
	TOP	BASE		
BIG LIME	1615	1690		
BIG INJUN	1695	1775		
COFFEE SHALE	2130	2175		
LOWER HURON	3485	4500		
JAVA SHALE	4500	4750		
PIPE CREEK SHALE	4750	4785		
ANGOLA SHALE	4785	5010		
LTD		5058		

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-033-05665

Farm name: Jones, John R. & Catherine V. Operator Well No.: Hurst-Zirk Unit 1H

LOCATION: Elevation: 1176' Quadrangle: Wolf Summit

District: Sardis County: Harrison  
Latitude: 12.679' Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude 5647' Feet West of 80 Deg. 22 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street				
Denver, CO 80202	20" 94#	74'	74'	71 Cu. Ft.
Agent: CT Corporation System	13 3/8" 48#	374'	374'	520 Cu. Ft. Class A
Inspector: Tristan Jenkins	9 5/8" 36#	2626'	2626'	1069 Cu. Ft. Class A
Date Permit Issued: 8/14/2012	5 1/2" 20#	13955'	13955'	3400 Cu. Ft. Class H
Date Well Work Commenced: 9/1/2012				
Date Well Work Completed: 11/4/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.6#	7302'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7113' TVD (deepest point drilled)				
Total Measured Depth (ft): 7086' TVD (BHL), 13955' MD				
Fresh Water Depth (ft.): est. 230'				
Salt Water Depth (ft.): est. 685', 1060'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): Pad constructed on reclaimed PHG coal bench				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7067' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 5931 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3300 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shawn Pearson  
Signature

1/24/13  
Date

OFFICE OF OIL AND GAS  
JAN 25 2013

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Hurst Unit 1H, API# 47-033-05626). Please reference the wireline logs submitted with Form WR-35 for Hurst Unit 1H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7328'-13889' (1100 holes)

Frac'd w/ 10,080 gals 15% HCL Acid, 139,632 bbls Slick Water carrying 721,760# 100 mesh,  
2,776,420# 40/70 and 1,657,110# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est.	1436'	1486'
Big Injun est.	1487'	2028'
Fifty Foot Sandstone est.	2029'	2210'
Gordon est.	2211'	2455'
Fifth Sandstone est.	2456'	2487'
Bayard est.	2488'	3146'
Speechley est.	3147'	3370'
Balltown est.	3371'	3908'
Bradford est.	3909'	4476'
Benson est.	4477'	4864'
Alexander est.	4865'	5140'
Elk est.	5141'	6645'
Middlesex	6646'	6649'
Sonyea	6650'	6820'
Burket	6821'	6843'
Tully	6844'	7066'
Marcellus	7067'	7113' TVD

JAN 21 2011

WR - 35  
Rev (5-4-1)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operators Report of Well Work

Date: December 3, 2009  
API #: 4703906152

LOCATION

Farm Name: Blue Eagle Land Operators well name: AL-276 Elevation: 1315 GL  
7 1/2 Min. Quad Mammoth District: Elk County: Kanawha Latitude: 2860FTS 38-20-00 Longitude: 11790FTW 81-12-30

COMPANY

Reed Gas, Inc.  
1314 Virginia Street East  
Charleston, WV 25301

Operator #: 41350

Agent: James W. Reed Jr.  
Inspector: Terry Urban  
Date Permit issued: 7/1/08  
Date Well Work Commenced: 9/16/08  
Date Well Work Completed: 11/7/08  
Total Depth (feet): 6317

Csg & Tbg (In-OD)	Used in Drilling	Left in Well	
13-3/8	32	32	FI
9-5/8	320	320	FI
7.000	2115	2115	FL
4-1/2	6311	6311	FI
Tubing			FI

Cement Data	
Slks (Lead/Tail)	Cement
Grout to surface	
102	To Surface
125	To Surface
150	

Verbal Plugging  
Date Permission Granted:

Fresh Water Depth (feet):  
Salt Water Depth (feet):  
Is coal being mined in area? No

OPEN FLOW DATA

Producing formation:	Marcellus	Pay zone depth (ft):	6260	6275
Gas: Initial Open Flow:	MCF/d	Oil:	Initial Open Flow:	Bbl/d
Final Open Flow:	* See Remarks MCF/d		Final Open Flow:	Bbl/d
Time of open flow between initial and final tests:	hours			
Static rock pressure:	hours			
2 <sup>nd</sup> Producing formation:	Rhinestreet	Pay zone depth (ft):	5264	6068
Gas: Initial Open Flow:	MCF/d	Oil:	Initial Open Flow:	Bbl/d
Final Open Flow:	* See Remarks MCF/d		Final Open Flow:	Bbl/d
Time of open flow between initial and final tests:	hours			
Static rock pressure:	hours			
3 <sup>rd</sup> Producing formation:	Huron	Pay zone depth (ft):	3834	5144
Gas: Initial Open Flow:	MCF/d	Oil:	Initial Open Flow:	Bbl/d
Final Open Flow:	* See Remarks MCF/d		Final Open Flow:	Bbl/d
Time of open flow between initial and final tests:	hours			
Static rock pressure:	hours			
4 <sup>th</sup> Producing formation:	L. Weir	Pay zone depth (ft):	2413	2458
Gas: Initial Open Flow:	MCF/d	Oil:	Initial Open Flow:	Bbl/d
Final Open Flow:	* See Remarks MCF/d		Final Open Flow:	Bbl/d
Time of open flow between initial and final tests:	hours			
Static rock pressure:	hours			
5 <sup>th</sup> Producing formation:	U. Weir	Pay zone depth (ft):	2364	2374
Gas: Initial Open Flow:	MCF/d	Oil:	Initial Open Flow:	Bbl/d
Final Open Flow:	* See Remarks MCF/d		Final Open Flow:	Bbl/d
Time of open flow between initial and final tests:	hours			
Static rock pressure:	hours			
6 <sup>th</sup> Producing formation:	Injun	Pay zone depth (ft):	2277	2296
Gas: Initial Open Flow:	MCF/d	Oil:	Initial Open Flow:	Bbl/d
Final Open Flow:	* See Remarks MCF/d		Final Open Flow:	Bbl/d
Time of open flow between initial and final tests:	hours			
Static rock pressure:	hours			

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG INCLUDING A SYSTEMATIC DETAILED GEOLOGIC RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE

Signed: \_\_\_\_\_  
By: James W. Reed, Jr.  
Date: \_\_\_\_\_

FEB 04 2015

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Office of Oil & Gas  
WV Department of  
Environmental Protection



Reed Gas, Inc.  
1314 Virginia Street East  
Charleston, WV 25301

Farm Name: Blue Eagle Land

Well Name: AL-276 Elevation: 1315

### GEOLOGICAL RECORD

Formation	Top	Base
Sand & Shale	Surface	832
Eagle Shale	832	836
Sand & Shale	832	910
Rosedale Sd.	910	945
Sand & Shale	945	1085
Salt Sd.	1085	1452
Sand & Shale	1452	1742
Maxon Sd.	1742	1793
Sand & Shale	1793	1798
Little Lime	1798	1832
Sand & Shale	1832	1832
Pencil Cave	1832	1847
Greenbrier Ls.	1847	2015
Big Injun Sd.	2015	2032
Sand & Shale	2032	2075

Formation	Top	Base
Weir Sd.	2075	2200
Sand & Shale	2200	2432
Coffee Sh.	2432	2450
Davonian Shale	2450	4105
Lower Huron Shale	4105	4515
Sand & Shale	4515	4975
Rhinestreet Sh.	4975	5535
Hamilton Sh.	5535	5700
Marcellus Shale	5700	5758
Onondaga Ls	5758	TD

### COMPLETION RECORD

Contractor: Universal	
Date:	
Stage 1	
Formation	Marcellus
Type	Nitrogen
Casing (in)	4.500
Top Perf Interval	6260
Base Perf Interval	6275
Perf Count	26
Breakdown (psi)	4112
Ave Treat (psi)	3184
Water (Bbl)	
Rate (bpm)	
Total Sand (lbs)	
Conc. (lb/gal)	
Nitrogen (Mscf)	456
Rate (Mscf/min)	43

Contractor: Universal	
Date:	
Stage 2	
Formation	Rhinestreet
Type	Nitrogen
Casing (in)	4.500
Top Perf Interval	5264
Base Perf Interval	6068
Perf Count	56
Breakdown (psi)	3741
Ave Treat (psi)	3689
Water (Bbl)	
Rate (bpm)	
Total Sand (lbs)	
Conc. (lb/gal)	
Nitrogen (Mscf)	1000
Rate (Mscf/min)	57

Contractor: Universal	
Date:	
Stage 3	
Formation	Huron
Type	Nitrogen
Casing (in)	4.500
Top Perf Interval	3834
Base Perf Interval	5144
Perf Count	55
Breakdown (psi)	3129
Ave Treat (psi)	3544
Water (Bbl)	
Rate (bpm)	
Total Sand (lbs)	
Conc. (lb/gal)	
Nitrogen (Mscf)	1000
Rate (Mscf/min)	52

Contractor: Universal	
Date:	
Stage 4	
Formation	L. Weir
Type	75 QFoam
Casing (in)	4.500
Top Perf Interval	2413
Base Perf Interval	2486
Perf Count	20
Breakdown (psi)	3045
Ave Treat (psi)	3058
Water (Bbl)	231
Ave Rate (bpm)	35
Total Sand (lbs)	40000
Conc. (lb/gal)	39816
Nitrogen (Mscf)	409
Rate (Mscf/min)	

Contractor: Universal	
Date:	
Stage 5	
Formation	U. Weir
Type	75Q Foam
Casing (in)	4.500
Top Perf Interval	2364
Base Perf Interval	2374
Perf Count	20
Breakdown (psi)	2310
Water (Bbl)	223
Ave Treat (psi)	2560
Ave Rate (bpm)	34
Total Sand (lbs)	50000
Conc. (lb/gal)	
Nitrogen (Mscf)	437
Rate (Mscf/min)	

Contractor: Universal	
Date:	
Stage 6	
Formation	Injun
Type	75Q Foam
Casing (in)	4.500
Top Perf Interval	2277
Base Perf Interval	2296
Perf Count	25
Breakdown (psi)	875
Water (Bbl)	184
Ave Treat (psi)	2503
Ave Rate (bpm)	23
Total Sand (lbs)	35000
15% Acid (gal)	
Nitrogen (Mscf)	276
Rate (Mscf/min)	

Remarks

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Office of Oil & Gas

\*Comingled

FOE: 540m/d  
IRP: 600#  
TIL: 03/19/08

FEB 04 2013

WV Department of  
Environmental Protection

WR-35  
Rev (5-01)

DATE: 06/25/2010  
API #: 47-059-01251-F

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Cotiga Limited Partnership

Operator Well No.: 823252

LOCATION: Elevation: 839.70

Quadrangle: Williamson

District: Hardee

County: Mingo

Latitude: 500 Ft South of 37° 45' 00".

Longitude: 5400 Ft West of 82° 15' 00"

Chesapeake Energy  
Address: P.O. Box 6070  
Charleston, WV 25362-000  
Agent: Tim Dugan  
Inspector: Gary Scites

Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
13 3/8"	47'KB	47' KB	Driven
9 5/8"	365'KB	365'KB	165
7"	1835'KB	1835'KB	357
4 1/2"	3690'KB	3690'KB	190

Date Permit Issued: 06/24/2008

Date Well Work Commenced: 08/26/2008

Date Well Work Completed: 10/03/2008

Verbal Plugging:

Date Permission granted on:

Rotary X Cable Rig

Total Depth (feet): DTD-3754', LTD-'

Fresh Water Depth (ft): 2 1/2" stream 110',

3 1/2" stream @ 240', 4" stream @ 300'

Salt Water Depth (ft): 1-2" stream @ 1316'

Is coal being mined in area(N/Y)? No

Coal Depths (ft): None Noted

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FEB 04 2013

WV Department of  
Environmental Protection

OPEN FLOW DATA

Producing formation: Berea Pay zone depth (ft) 2622' to 2649'

Gas: Initial open flow: 146 MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow: 146 MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 72 Hours

Static rock Pressure: 426 psi (surface pressure) after: 72 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: \_\_\_\_\_

By: \_\_\_\_\_

Date: 2-4-2013

WV Department of  
Environmental Protection

WR-35  
Rev (5-01)

DATE: 11-30-2011  
API #: 47-5902105

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Theodore & Marie Floyd

Operator Well NO.: 1987

LOCATION: Elevation: 792.4'

Quadrangle: DELBARTON

District: LEE County: MINGO  
Latitude: 8,471 Feet South of 37 Deg. 45 Min. 00 Sec.  
Longitude 5,414 Feet West of 82 Deg. 10 Min. 30 Sec.

Company: Mountain Ridge, LLC

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: <u>HC 71, RT. 4, BOX 87-A</u> <u>WHARNCLIFFE, WV 25651</u>	<u>13 3/8"</u>	<u>51'</u>	<u>51'</u>	
Agent: <u>JAMES HILL</u>	<u>9 5/8"</u>	<u>262'</u>	<u>262'</u>	<u>148</u>
Inspector: <u>GARY SCITES</u>	<u>7"</u>	<u>1904'</u>	<u>1904'</u>	<u>449</u>
Date Permit Issued: <u>8/25/2009</u>	<u>4 1/2"</u>	<u>NONE</u>		
Date Well Work Commenced: <u>08/25/11</u>				
Date Well Work Completed: <u>11/20/11</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <u>YES</u> Cable <u>      </u> Rig <u>      </u>				
Total Depth (feet): <u>3,912'</u>				
Fresh Water Depth (ft.): <u>NONE</u>				
Salt Water Depth (ft.): <u>930'</u>				
Is coal being mined in area (N/Y)? <u>NO</u>				
Coal Depths (ft.): <u>      </u>				

OPEN FLOW DATA

Producing formation LIME Pay zone depth (ft) SEE ATTACHED  
Gas: Initial open flow 1,495 MCF/d Oil: Initial open flow        Bbl/d  
Final open flow        MCF/d Final open flow        Bbl/d  
Time of open flow between initial and final tests        Hours  
Static rock Pressure 640 psig (surface pressure) after 72 Hours

Second producing formation        Pay zone depth (ft)         
Gas: Initial open flow        MCF/d Oil: Initial open flow        Bbl/d  
Final open flow        MCF/d Final open flow        Bbl/d  
Time of open flow between initial and final tests        Hours  
Static rock Pressure        psig (surface pressure) after        Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed:       

Date: 11-30-2011

API# 47-5902008

WELL 1987

ROCK TYPE (DESCRIBE ROCK TYPES AND OTHER MATERIALS PENETRATED AND RECORD OCCURRENCES OF OIL GAS, AND WATER FROM SURFACE TO TOTAL DEPTH)			ROCK TYPE (DESCRIBE ROCK TYPES AND OTHER MATERIALS PENETRATED AND RECORD OCCURRENCES OF OIL GAS, AND WATER FROM SURFACE TO TOTAL DEPTH)		
FROM	TO		FROM	TO	
0	50	FILL DIRT			GAS CHECK @ 2100' - BIG LIME 11/10 7"
50	300	SAND/SHALE			GAS CHECK @ 2310' - WEIR 13/10 7"
300	330	SHALE			GAS CHECK @ 2700' - COFFEE 11/10 7"
330	480	SAND/SHALE			GAS CHECK @ 2820' - BR. SHALE 11/10 7"
480	540	SHALE			GAS CHECK @ 4423' - BR. SHALE/SMELL
540	660	SAND/SHALE			
660	960	SAND			
960	1020	SAND/SHALE			
1020	1120	SAND			
1120	1620	SAND/SHALE/RED ROCK			
1620	1740	SAND			
1740	1820	SAND/SHALE			
1820	1880	LITTLE LIME			
1880	2120	BIG LIME			
2120	2230	INJUN			
2230	2685	WEIR			
2685	2720	COFFEE SHALE			
2720	2810	BEREA			
2810		BROWN SHALE			

QUALITY NATURAL GAS, LLC  
WR-35 COMPLETION REPORT - Attachment  
TREATMENT SUMMARY

WELL NAME & NO.  
API #  
DATE

QUALITY NATURAL GAS, LLC, #1987  
47-5902105  
11/20/2011

**STAGE NO. 1**

TYPE FRAC  
ACID AMOUNT  
# PERFORATIONS  
PERF INTERVAL  
MAXIMUM PRESSURE  
INSTANT SHUT IN PRESSURE  
TOTAL TREATMENT VOLUME

NATURAL WELL

**STAGE NO. 2**

TYPE FRAC  
ACID AMOUNT  
# PERFORATIONS  
PERF INTERVAL  
MAXIMUM PRESSURE  
INSTANT SHUT IN PRESSURE  
TOTAL TREATMENT VOLUME

**STAGE NO. 3**

TYPE FRAC  
ACID AMOUNT  
# PERFORATIONS  
PERF INTERVAL  
MAXIMUM PRESSURE  
INSTANT SHUT IN PRESSURE  
TOTAL TREATMENT VOLUME

WR-35  
Rev (8-10)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 5-12-2011  
API #: 47-9101188

Farm name: Armstrong, Robert L & Julia Operator Well No.: Armstrong 1HM

LOCATION: Elevation: 1,326' Quadrangle: Grafton

District: Courthouse County: Taylor  
Latitude: 39 Feet South of 20 Deg. 00 Min.  Sec.   
Longitude 80 Feet West of 05 Deg. 11 Min.  Sec.

Company:

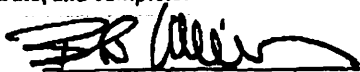
Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
PDC Mountaineer, LLC 120 Genesis Blvd. Bridgeport, WV 26330	20"	58'	58'	
Agent: <u>Bob Williamson</u>	13 3/8"	460'	460'	362 sxs
Inspector: <u>Bryan Harris</u>	9 5/8"	2,718	2,718'	640 sxs
Date Permit Issued: <u>11/25/2009</u>	5 1/2"	11,457'	11,457'	1,143 sxs
Date Well Work Commenced: <u>3/10/2010</u>				
Date Well Work Completed: <u>6/10/2010</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Vertical Depth (ft):				
Total Measured Depth (ft):				
Fresh Water Depth (ft.): <u>35', 200', 340'</u>				
Salt Water Depth (ft.): <u>Grantz @2020'</u>				
Is coal being mined in area (N/Y)? <u>No</u>				
Coal Depths (ft.): <u>400', 1030'</u>				
Void(s) encountered (N/Y) Depth(s)				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft)   
Gas: Initial open flow  MCF/d Oil: Initial open flow  Bbl/d  
Final open flow 2,200 MCF/d Final open flow  Bbl/d  
Time of open flow between initial and final tests  Hours  
Static rock Pressure 700 psig (surface pressure) after 24 Hours

Second producing formation  Pay zone depth (ft)   
Gas: Initial open flow  MCF/d Oil: Initial open flow  Bbl/d  
Final open flow  MCF/d Final open flow  Bbl/d  
Time of open flow between initial and final tests  Hours  
Static rock Pressure  psig (surface pressure) after  Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

5-12-2011  
Date

Were cuttings caught during drilling? Yes X No       

Were  $\frac{N}{Y/N}$  Electrical,  $\frac{Y}{Y/N}$  Mechanical,  $\frac{Y}{Y/N}$  or Geophysical logs recorded on this well?

### Perforated Intervals, Fracturing, or Stimulating:

**See attached sheets.**

Formations Encountered: \_\_\_\_\_ Top Depth \_\_\_\_\_ / \_\_\_\_\_ Bottom Depth \_\_\_\_\_  
Surface: \_\_\_\_\_



Armstrong #1HMA  
 47-091-01189  
 GL: 1326'  
 KB: 1344'  
 Depths are taken from KE

FORMATION	WELL LOG			REMARKS: FRESH & SALT WATER, COAL, OIL & GAS
	MD TOP FEET	MD BASE FEET	TVD TOP FEET	
		0		
sand, shale, RR	0	1540	0	Damp @ 30'
Little Lime	1540	1556	1540	1" H <sub>2</sub> O @ 250'
sand, shale	1556	1580	1556	2" Saltwater @ 2040'
Big Lime	1580	1760	1580	
sand, shale	1760	1866	1760	
Weir	1866	1892	1866	
sand, shale	1892	2022	1892	
Gantz	2022	2044	2022	
sand, shale	2044	2066	2044	
50 ft	2066	2153	2066	
sand, shale	2153	2176	2153	
30 ft	2176	2200	2176	
sand, shale	2200	2302	2200	
Gordon	2302	2320	2302	
sand, shale	2320	2540	2320	
4th	2540	2566	2540	
sand, shale	2566	2612	2566	
5th	2612	2650	2612	
sand, shale	2650	2670	2650	
Bayard	2670	2693	2670	
sand, shale	2693	2946	2693	
Speechley	2946	3110	2946	
sand, shale	3110	3182	3110	
Salitown	3182	3446	3182	
sand, shale	3446	3532	3446	
Bradford	3532	3920	3532	
sand, shale	3920	4114	3920	
Riley	4114	4262	4114	
sand, shale	4262	4516	4262	
Benson	4516	4598	4516	
sand, shale	4598	4774	4598	
1st Elk	4774	4818	4774	Mudloggers on well at 6450' to TD.
sand, shale	4818	6638	4818	TD vertical @ 7150' / KOP @ 7184'
Sycamore	6650	6684	6650	36-50 unit show in Sycamore
sand, shale	6684	5742	6684	104 unit show at 7130'
Genesee	7464	7487	7449	
Tully	7487	7558	7470	4702 unit show in Genesee at 7449 TVD
sand, shale	7558	7692	7470	Gas shows in Marcellus lateral from 10 to 5,000 units.
Marcellus	7728	11,483	7657	
	Drillers TD			

1/20/2010

API # 47 095 01646 F

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas**

**Well Operator's Report of Well Work**

COPY

Farm name: GLOVER, FORREST, ETAL

Operator Well No.: M. ELDER 11

LOCATION: Elevation: 893'

Quadrangle: CENTERPOINT 7.5'

District: MCELROY

County: TYLER

Latitude: 7,850 Feet south of 39 Deg 27 Min 30 Sec.

Longitude: 7,100 Feet west of 80 Deg 40 Min 0 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 01/20/10

Well work Commenced: 04/01/10

Well work Completed: 04/01/10

Verbal plugging

permission granted on:

Rotary X Cable        Rig       

Total Depth (feet) 2925'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	220'	220'	180 sks
4 1/2"	2896.7'	2896.7'	275 sks

## OPEN FLOW DATA

## \* WATERFLOOD INJECTOR

Producing formation	Gordon	Pay zone depth (ft)	2766'-2780'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED

Office of Oil &amp; Gas

For: EAST RESOURCES, INC.

FEB 05 2013

By:  
Date:

*John Elder*  
5/12/10

**Treatment:**

Treated perms. 2766'-2780' w/ 250 gals. 15% HCl acid,  
380 bbls cross linked gel, and 25,800 # 20/40 sand.

**Well Log:**

SEE ORIGINAL WELL RECORD

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

COPY

Farm name: LEMASTERS, DAVID

Operator Well No.: I. BAKER 5

LOCATION: Elevation: 1,304'

Quadrangle: CENTERPOINT 7.5'

District: MCELROY

County: TYLER

Latitude: 9,780 Feet south of 39 Deg 27 Min 30 Sec.

Longitude: 9,740 Feet west of 80 Deg 40 Min 0 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 01/20/10

Well work Commenced: 03/30/10

Well work Completed: 04/02/10

Verbal plugging

Permission granted on:

Rotary ☒ Cable ☐ Rig

Total Depth (feet) 3360'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	570'	570'	290 sks
4 1/2"	3235.7'	3235.7'	150 sks

## OPEN FLOW DATA

## \* WATERFLOOD INJECTOR

Producing formation		Gordon	Pay zone depth (ft)	3165'-3180'
Gas:	Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
	Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests				Hours
Static rock pressure		psig (surface pressure)	after	Hours
Second producing formation			Pay zone depth (ft)	
Gas:	Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
	Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests				Hours
Static rock pressure		psig (surface pressure)	after	Hours

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RECEIVED  
Office of Oil & Gas

FEB 05 2013

For: EAST RESOURCES, INC.

By:

Date:

WV Department of  
Environmental Protection

*Bar Helder*  
5/12/10

Treatment:

Treated perms. 3165'-3187' w/ 250 gals. 15 % HCl acid,  
388 bbls cross linked gel, and 25,500 # 20/40 sand.

Well Log:

SEE ORIGINAL WELL RECORD

---

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

COPY

**Well Operator's Report of Well Work**

Farm name: LEMASTERS, DAVID W., ET AL Operator Well No.: B.A. SWIGER 7

LOCATION: Elevation: 1,168' Quadrangle: CENTERPOINT 7.5'

District: MCELROY County: TYLER  
Latitude: 6,720 Feet south of 39 Deg 27 Min 30 Sec.  
Longitude: 11,180 Feet west of 80 Deg 40 Min 0 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 12/18/09

Well work Commenced: 04/16/10

Well work Completed: 04/16/10

Verbal plugging

permission granted on:

Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_

Total Depth (feet) 3172'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	442'	442'	225 sks
4 1/2"	3101.4'	3101.4'	275 sks

OPEN FLOW DATA \* WATERFLOOD INJECTOR

Producing formation <u>Gordon</u>		Pay zone depth (ft) <u>3026'-3036'</u>
Gas: Initial open flow	* MCF/d	Oil: Initial open flow
Final open flow	* MCF/d	Final open flow
Time of open flow between initial and final tests		Hours
Static rock pressure	psig (surface pressure)	after _____ Hours
Second producing formation _____		Pay zone depth (ft) _____
Gas: Initial open flow	_____ MCF/d	Oil: Initial open flow
Final open flow	_____ MCF/d	Final open flow
Time of open flow between initial and final tests		Hours
Static rock pressure	_____ psig (surface pressure)	after _____ Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

**RECEIVED**  
Office of Oil & Gas

FEB 05 2013

For: EAST RESOURCES, INC.

By: \_\_\_\_\_

Date: \_\_\_\_\_

WV Department of  
Environmental Protection

*Ba Nelder*  
5/12/10

**Treatment :**

Treated perms. 3026'-3036' w/ 250 gals. 15% HCl acid,  
350 bbls cross linked gel, and 22,000 # 20/40 sand.

**Well Log :**

SEE ORIGINAL WELL RECORD

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas**

COPY

**Well Operator's Report of Well Work**

Farm name: GLOVER, FORREST

Operator Well No.: M ELDER 13-R

LOCATION: Elevation: 1,320.00

Quadrangle: CENTERPOINT 7.5'

District: MCELROY

County: TYLER

Latitude: 7,950 Feet south of 39 Deg 27 Min 30 Sec.

Longitude: 8,760 Feet west of 80 Deg 40 Min 00 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 01/20/10

Well work Commenced: 04/06/10

Well work Completed: 04/08/10

Verbal plugging

permission granted on:

Rotary ☒ Cable ☐ Rig

Total Depth (feet) 3336'

Fresh water depths (ft) N/A

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): 657'-661'

Casing/ tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	575'	575'	250 sks
4 1/2"	3280'	3280'	275 sks

## OPEN FLOW DATA

## \* WATERFLOOD INJECTOR

Producing formation	Gordon	Pay zone depth (ft)	3184'-3210'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests		Hours	
Static rock pressure	psig (surface pressure)	after	Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests		Hours	
Static rock pressure	psig (surface pressure)	after	Hours

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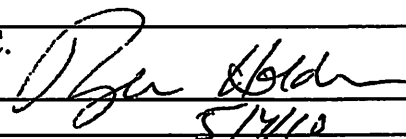
RECEIVED

Office of Oil &amp; Gas For: EAST RESOURCES, INC.

FEB 05 2013

By:

Date:


  
5/14/10



**Treatment :**

Treated Gordon perforations 3190'-3206' w/250 gals 15% HCL, 380 bbls cross linked gel and 25,000 # 20/40 sand

**Well Log :**

SEE ORIGINAL WELL RECORD

---

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

COPY

Farm name: GLOVER, STEPHEN PAUL

Operator Well No.: P HORNER 13

LOCATION: Elevation: 812'

Quadrangle: CENTERPOINT 7.5'

District: MCELROY

County: TYLER

Latitude: 4,825 Feet south of 39 Deg 27 Min 30 Sec.

Longitude: 6,945 Feet west of 80 Deg 40 Min 00 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 01/20/10

Well work Commenced: 04/06/10

Well work Completed: 04/08/10

Verbal plugging

Permission granted on:

Rotary ☒ Cable ☐ Rig

Total Depth (feet) 2,885

Fresh water depths (ft) N/A

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing/ tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	306'	306'	125 sks
4 1/2"	2875'	2875'	300 sks

OPEN FLOW DATA

\* WATERFLOOD INJECTOR

Producing formation		Gordon	Pay zone depth (ft)	2783'-2817'
Gas:	Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
	Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests			Hours	
Static rock pressure		psig (surface pressure)	after	Hours
Second producing formation			Pay zone depth (ft)	
Gas:	Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
	Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests			Hours	
Static rock pressure		psig (surface pressure)	after	Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED  
Office of Oil & Gas

For: EAST RESOURCES, INC.

FEB 05 2013

By:

Date:

*Be Keldner*  
2/4/10

WV Department of  
Environmental Protection

**Treatment :** Treated Gordon perforations 2783'-2817' w/250 gals 15% HCL, 406 bbls cross linked gel and 25,000 # 20/40 sand

**Well Log :** SEE ORIGINAL WELL RECORD

---

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas**

**COPY**

**Well Operator's Report of Well Work**

Farm name: GLOVER, STEPHEN PAUL Operator Well No.: H. J. INGRAM 5

LOCATION: Elevation: 925' Quadrangle: CENTERPOINT 7.5'

District: MCELROY County: TYLER  
Latitude: 4,350 Feet south of 39 Deg 27 Min 30 Sec.  
Longitude: 6,110 Feet west of 80 Deg 40 Min 00 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 12/30/09

Well work Commenced: 04/08/10

Well work Completed: 04/10/10

Verbal plugging permission granted on:

Rotary X Cable        Rig       

Total Depth (feet) 2,940

Fresh water depths (ft) N/A

Salt water depths (ft) 1720

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing/ tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
7"	355.00'	355.00'	90 sks
4 1/2"	2901.00'	2901.00'	150 sks

**OPEN FLOW DATA                      \* WATERFLOOD INJECTOR**

Producing formation	Gordon	Pay zone depth (ft)	2794'-2809'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests		Hours	
Static rock pressure	psig (surface pressure)	after	Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests		Hours	
Static rock pressure	psig (surface pressure)	after	Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

**RECEIVED**  
**Office of Oil & Gas**

FEB 05 2013

For: EAST RESOURCES, INC.

By:                     

Date:                     

                      
5/4/10

WV Department of

**Treatment :**

Treated Gordon perforations 2794'-2809' w/250 gals 15% HCL, 389 bbls cross linked gel and 22,000 # 20/40 sand

**Well Log :**

SEE ORIGINAL WELL RECORD

---

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

copy

Farm name: GLOVER, STEPHEN PAUL Operator Well No.: E. T. PARKS 7

LOCATION: Elevation: 1006' Quadrangle: CENTERPOINT 7.5'

District: MCELROY

County: TYLER

Latitude: 5,170 Feet south of 39 Deg 27 Min 30 Sec.

Longitude: 6,060 Feet west of 80 Deg 40 Min 00 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 01/20/10

Well work Commenced: 04/06/10

Well work Completed: 04/08/10

Verbal plugging

Permission granted on:

Rotary X Cable      Rig     

Total Depth (feet) 3,030

Fresh water depths (ft) N/A

Salt water depths (ft) 1440

Is coal being mined in area (Y/N) N

Coal Depths (ft): NA

Casing/ tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
7"	354.00'	354.00'	90 sks
4 1/2"	2962.90'	2962.90'	150 sks

OPEN FLOW DATA \* WATERFLOOD INJECTOR

Producing formation Gordon Pay zone depth (ft) 2884'-2915'

Gas: Initial open flow \* MCF/d Oil: Initial open flow \* Bbl/d

Final open flow \* MCF/d Final open flow \* Bbl/d

Time of open flow between initial and final tests      Hours

Static rock pressure      psig (surface pressure) after      Hours

Second producing formation      Pay zone depth (ft)     

Gas: Initial open flow      MCF/d Oil: Initial open flow      Bbl/d

Final open flow      MCF/d Final open flow      Bbl/d

Time of open flow between initial and final tests      Hours

Static rock pressure      psig (surface pressure) after      Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED

Office of Oil & Gas For: EAST RESOURCES, INC.

FEB 05 2013

By: [Signature]

Date: 5/4/10

Treatment: : Treated Gordon perforations 2884'-2915' w/250 gals 15% HCL, 398 bbls cross linked gel and 24,000 # 20/40 sand

Well Log: SEE ORIGINAL WELL RECORD

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**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas**

**Well Operator's Report of Well Work**

**COPY**

Farm name: GLOVER, FRED &amp; DOTTIE

Operator Well No.: MCINTYRE 15

LOCATION: Elevation: 1,311'

Quadrangle: CENTERPOINT 7.5'

District: MCELROY

County: TYLER

Latitude: 10,725 Feet south of 39 Deg 27 Min 30 Sec.

Longitude: 6,100 Feet west of 80 Deg 40 Min 0 Sec.

Company: EAST RESOURCES, INC.  
P.O. BOX 5519  
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: JOE TAYLOR

Permit Issued: 01/20/10

Well work Commenced: 04/16/10

Well work Completed: 04/16/10

Verbal plugging

permission granted on:

Rotary X Cable        Rig       Total Depth (feet) 3,320'Fresh water depths (ft) NASalt water depths (ft) NAIs coal being mined in area (Y/N) NCoal Depths (ft): NA

Casing Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
7"	644'	644'	160 sks
4 1/2"	3278.8'	3278.8'	150 sks

## OPEN FLOW DATA

## \* WATERFLOOD INJECTOR

Producing formation	Gordon	Pay zone depth (ft)	3173'-3185', 3199'-3203'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests			Hours
Static rock pressure	psig (surface pressure)	after	Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

**RECEIVED  
Office of Oil & Gas**

FEB 05 2013

For: EAST RESOURCES, INC.

By:

Date:

*Ba Heden*  
5/12/10

**WV Department of  
Environmental Protection**



**Treatment :**

Treated perms. 3173'-3203' w/ 250 gals. 15% HCl acid,  
393 bbls cross linked gel, and 25,000 # 20/40 sand.

**Well Log :**

SEE ORIGINAL WELL RECORD

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WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-095-02038

Farm name: Moore, Forest C. Jr. & Brenda Operator Well No.: Ed Arnold Unit 1H

LOCATION: Elevation: 749' Quadrangle: Center Point 7.5'

District: McElroy County: Tyler  
Latitude: 8995' Feet South of 39 Deg. 25 Min. 00 Sec.  
Longitude 7584' Feet West of 80 Deg. 42 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>1625 17th Street</u>	<u>20" 94#</u>	<u>40'</u>	<u>40'</u>	<u>38 Cu. Ft.</u>
<u>Denver, CO 80202</u>	<u>13 3/8" 68#</u>	<u>537'</u>	<u>537'</u>	<u>746 Cu. Ft. Class A</u>
<u>Agent: CT Corporation System</u>	<u>9 5/8" 36#</u>	<u>2662'</u>	<u>2662'</u>	<u>1084 Cu. Ft. Class A</u>
<u>Inspector: Joe Taylor</u>	<u>5 1/2" 20#</u>	<u>14121'</u>	<u>14121'</u>	<u>3435 Cu. Ft. Class H</u>
<u>Date Permit Issued: 12/22/2011</u>				
<u>Date Well Work Commenced: 4/6/2012</u>				
<u>Date Well Work Completed: 7/26/2012</u>				
<u>Verbal Plugging: N/A</u>				
<u>Date Permission granted on: N/A</u>	<u>2 3/8" 4.7#</u>	<u>6856'</u>		
<u>Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/></u>				
<u>Total Vertical Depth (ft): 6703' TVD</u>				
<u>Total Measured Depth (ft): 14121' MD</u>				
<u>Fresh Water Depth (ft.): est. 120', 291'</u>				
<u>Salt Water Depth (ft.): 1081'</u>				
<u>Is coal being mined in area (N/Y)? N</u>				
<u>Coal Depths (ft.): est. 672', 747'</u>				
<u>Void(s) encountered (N/Y) Depth(s) None</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6557' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 8348 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3550 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shawn Pedraza  
Signature

1/24/13  
Date

Received  
Office of Oil & Gas  
JAN 25 2013

Were core samples taken? Yes \_\_\_\_\_ No X \_\_\_\_\_

Were cuttings caught during drilling? Yes X \_\_\_\_\_ No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL,  
Photo Density/ Compensated Neutron/ Gamma Ray and Dual Laterolog/ Gamma Ray

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 6848'-14057' (1248 holes)

Frac'd w/ 11,000 gals 15% HCL Acid, 152,482 bbls Slick Water carrying 795,784# 100 mesh,  
2,743,723# 40/70 and 1,486,074# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

Formations Encountered:	Top Depth	Bottom Depth
<u>Surface:</u>		
Gantz Sand	2678'	2803'
Fifty Foot Sand	2804'	2918'
Gordon	2919'	3122'
Fifth Sandstone	3123'	3153'
Bayard	3154'	3526'
Warren	3527'	3903'
Speechley	3904'	4183'
Balltown	4184'	4381'
Bradford	4382'	4836'
Benson	4837'	5090'
Alexander	5091'	5283'
Elk	5284'	5901'
Rhinestreet	5902'	6169'
Sycamore	5902'	6328'
Middlesex	6170'	6832'
West River Shale	6329'	6469'
Burket	6383'	6497'
Tully	6470'	6556'
Marcellus	6498'	6703' TVD
	6557'	

Horizontal  
Orifices of Oil & Gas  
JAN 25 2015

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/14/2013  
API #: 47-095-02039

Farm name: Moore, Forest C. Jr. & Brenda Operator Well No.: Ed Arnold Unit 2H

LOCATION: Elevation: 749' Quadrangle: Center Point 7.5'

District: McElroy County: Tyler  
Latitude: 8987' Feet South of 39 Deg. 25 Min. 00 Sec.  
Longitude 7558' Feet West of 80 Deg. 42 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address: <u>1625 17th Street</u>	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>Denver, CO 80202</u>	<u>20" 94#</u>	<u>40'</u>	<u>40'</u>	<u>38 Cu. Ft.</u>
Agent: <u>CT Corporation System</u>	<u>13 3/8" 48#</u>	<u>544'</u>	<u>544'</u>	<u>756 Cu. Ft. Class A</u>
Inspector: <u>Joe Taylor</u>	<u>9 5/8" 36#</u>	<u>2833'</u>	<u>2833'</u>	<u>1153 Cu. Ft. Class A</u>
Date Permit Issued: <u>12/22/2011</u>	<u>5 1/2" 20#</u>	<u>15396'</u>	<u>15396'</u>	<u>3734 Cu. Ft. Class H</u>
Date Well Work Commenced: <u>4/6/2012</u>				
Date Well Work Completed: <u>8/6/2012</u>				
Verbal Plugging: <u>N/A</u>				
Date Permission granted on: <u>N/A</u>	<u>2 3/8" 4.7#</u>	<u>6966'</u>		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>7275' TVD</u>				
Total Measured Depth (ft): <u>15396' MD</u>				
Fresh Water Depth (ft.): <u>120', 291'</u>				
Salt Water Depth (ft.): <u>None available</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>est. 672', 747'</u>				
Void(s) encountered (N/Y) Depth(s) <u>None</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6545' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 6033 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3550 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shawna Pedit

Signature

1/14/13  
Date

Received  
Office of Oil & Gas  
JAN 23 2013

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - CBL,

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Ed Arnold Unit 1H API#47-095-02038). Please reference the wireline logs submitted with Form WR-35 for Ed Arnold Unit 1H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7106'-15232' (1420 holes)

Frac'd w/ 12,500 gals 15% HCL Acid, 171,189 bbls Slick Water carrying 943,127# 100 mesh,  
3,272,127# 40/70 and 1,881,550# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): N/A

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Gantz Sand est.	2678'	2803'
Fifty Foot Sand est.	2804'	2918'
Gordon est.	2919'	3122'
Fifth Sandstone est.	3123'	3153'
Bayard est.	3154'	3526'
Warren est.	3527'	4836'
Benson est.	4837'	5090'
Alexander est.	5091'	5283'
Elk est.	5284'	5901'
Rhinestreet est.	5902'	6169'
Sycamore est.	6170'	6205'
Sonyea	6206'	6317'
Middlesex	6318'	6369'
West River Shale	6370'	6458'
Burket	6459'	6487'
Tully	6488'	6544'
Marcellus	6545'	7275' TVD

Received  
Office of Oil & Gas

JAN 24 2013